INVENTORS

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show files
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[File 350] Derwent WPIX 1963-2008/UD=200814

[File 65] Inside Conferences 1993-2008/Mar 11

[File 35] Dissertation Abs Online 1861-2008/Nov


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Set     Items   Description
S1      15548   S AU=(SAITO, K? OR SAITO K?)
S2          0   S AU=(KOETSU, S? OR KOETSU S?)
S3          0   S SAITO(2N)KOETSU
S4     283435   S ULTRASO? OR ULTRA()(SOUND? OR SONIC? OR SONOGRA?) OR
(HI OR HIGH)()FREQUENC?(3N)SOUND? OR SONOGRA? OR HIFU OR ELASTIC()WAVE?
OR ACOUSTIC?
S5        155   S S1 AND S4
S6        153   RD  (unique items)
S7        141   IDPAT (sorted in duplicate/non-duplicate order)
S8        141   IDPAT (primary/non-duplicate records only)
S9         12   S S6 NOT S8
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8/5/1 (Item 1 from file: 350)
Fulltext available through:

Order File History
Derwent WPIX

0017350227

& & *Drawing available*
WPI Acc no: 2008-B70666/200812
XRAM Acc no: C2008-047688
XRPX Acc No: N2008-135147
Ultrasound probe for ultrasonic diagnosing apparatus, has several grooves that isolate piezoelectric element, acoustic matching layer and signal conductor in sequence direction of piezoelectric element
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: SAITO K

Patent Family (1 patents, 118 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2007126069	A1	20071108	WO 2007JP59221	A	20070427	200812	B

Priority Applications (no., kind, date): JP 2006125536 A 20060428

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2007126069	A1	JA	59	6		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BH BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LY MA MD MG MK MN MW MX MY MZ NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW					
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MT MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					

Alerting Abstract WO A1
NOVELTY - The ultrasound probe (100) has several grooves (160) provided on two-layered acoustic matching layer (121) provided on the surface of a piezoelectric element (110), in length direction orthogonal to sequence direction of the piezoelectric element. The signal conductors (150) are provided on the surfaces of the piezoelectric element. Another grooves isolate the piezoelectric element, acoustic matching layer and the signal conductor in the sequence direction of the piezoelectric element.
USE - For ultrasonic diagnosing apparatus used in medical and industrial fields for diagnosing human body, animal, material flaw, etc.
ADVANTAGE - The quality and resolution of the ultrasonic image are improved. A wideband characteristic is obtained.
DESCRIPTION OF DRAWINGS - The figure shows a partial schematic perspective view of the ultrasound probe.
100 Ultra sound probe
110 Piezoelectric element
121 Acoustic matching layer
150 Signal conductor
160 Grooves

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; DIAGNOSE; APPARATUS; GROOVE; ISOLATE; PIEZOELECTRIC; ELEMENT; ACOUSTIC; MATCH; LAYER; SIGNAL; CONDUCTOR; SEQUENCE; DIRECTION

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	F	B	20060101
A61B-0008/00	C	I		B	20060101

File Segment: CPI; EngPI; EPI
DWPI Class: A96; S05; P31
Manual Codes (EPI/S-X): S05-D03
Manual Codes (CPI/A-N): A12-E13; A12-E15

8/5/3 (Item 3 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0017037104 & & *Drawing available*
WPI Acc no: 2007-752164/200770
XRAM Acc no: C2007-263637
XRPX Acc No: N2007-593617
Ultrasound probe arranges several piezoelectric elements having sound matching layer consisting of rubber-elastic material, on one surface
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: SAITO K

Patent Family (1 patents, 116 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2007088772	A1	20070809	WO 2007JP51191	A	20070125	200770	B

Priority Applications (no., kind, date): JP 200623169 A 20060131; JP 200623170 A 20060131

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 2007088772	A1	JA	61	12	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MY MZ NA NG NI NO NZ OM PG PH PL PT RO RS				

	RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Alerting Abstract WO A1
NOVELTY - The probe (10) arranges several piezoelectric elements (1) having a sound matching layer on one surface. The sound matching layer (2) consists of rubber-elastic material whose acoustic impedance is smaller than the acoustic impedance of the piezoelectric element, and larger than acoustic impedance of a test object.
USE - For use in ultrasound transmission of wave of test objects of living organisms such as human and animal.
ADVANTAGE - The capability to eliminate difficulty of machining is obtained, the ultrasonic wave directivity width is increased, and a high resolution diagnostic image is acquired.
DESCRIPTION OF DRAWINGS - The figure shows a schematic perspective view of the ultrasound probe.
1 Piezoelectric element
2 Sound matching layer
3 Rear surface load material
4 Acoustic lens
10 Ultrasound probe

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; ARRANGE; PIEZOELECTRIC; ELEMENT; SOUND; MATCH; LAYER; CONSIST; RUBBER; ELASTIC; MATERIAL; ONE; SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	L	B	20060101
H04R-0017/00	A	I	F	B	20060101
A61B-0008/00	C	I		B	20060101
H04R-0017/00	C	I		B	20060101

File Segment: CPI; EngPI; EPI
DWPI Class: A96; B04; S03; S05; V06; P31
Manual Codes (EPI/S-X): S03-E08X; S05-D03A1; V06-V01B; V06-V02R; V06-V04K
Manual Codes (CPI/A-N): A12-V; A12-V03C2; B12-K04C1

8/5/4 (Item 4 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0016996635 & & *Drawing available*
WPI Acc no: 2007-711699/200767
XRPX Acc No: N2007-560115
Endoscope apparatus for e.g. medical application, generates display images containing both ultrasonic image and endoscope image, and controls recording of both images in different recording formats
Patent Assignee: OLYMPUS MEDICAL SYSTEMS KK (OLYU)
Inventor: AMANO S; ETO T; FUJISAWA Y; HASE K; HASHIMOTO H; HIRAI C; IWASAKI T; KAWAMURA A; KONISHI J; MIYAGI H; MOCHIDA A; OGASAWARA K; SAITO K; TAKAHASHI K; TSUNAKAWA M

Patent Family (1 patents, 1 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 2007175430	A	20070712	JP 2005380208	A	20051228	200767	B

Priority Applications (no., kind, date): JP 2005380208 A 20051228

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
JP 2007175430	A	JA	15	17	

Alerting Abstract JP A
NOVELTY - An endoscope image generation unit generates endoscope image (Ra). A medical image acquisition unit acquires ultrasonic image (Rb) from an external medical apparatus such as ultrasonic observation apparatus. A display image generation unit generates the display image containing both ultrasonic image and endoscope image. A recording control unit controls recording of the endoscope image and ultrasonic image in different recording formats.
USE - For medical applications e.g. intra-corporeal diagnosis and also for industrial applications.
ADVANTAGE - The visibility of ultrasonic image superimposed with the endoscope image is improved.
DESCRIPTION OF DRAWINGS - The figure shows the display image of monitor of the endoscope apparatus.
5 Monitor
122 Character information

Ra Endoscope image
Rb Ultrasonic image

Title Terms /Index Terms/Additional Words: ENDOSCOPE; APPARATUS; MEDICAL; APPLY; GENERATE; DISPLAY; IMAGE; CONTAIN; ULTRASONIC; CONTROL; RECORD; FORMAT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0001/04	A	I	F	B	20060101
G02B-0023/24	A	I	L	B	20060101
A61B-0001/04	C	I		B	20060101
G02B-0023/24	C	I		B	20060101

File Segment: EngPI; EPI;
DWPI Class: S02; S05; T01; P31; P81
Manual Codes (EPI/S-X): S02-J04B3C; S05-D03E; S05-D04B; T01-J06A; T01-J10A; T01-J10B1

^8/5/18 (Item 18 from file: 350)
Fulltext available through: Order File History

0015492554 & & *Drawing available*
WPI Acc no: 2006-056680/200606
XRPX Acc No: N2006-048906
Ultrasonic probe used for ultrasonic diagnosing device, has ultrasonic transceiver accommodated in packing case which is filled with acoustic medium
Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: SAITO K

Patent Family (6 patents, 109 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005120356	A1	20051222	WO 2005JP9121	A	20050519	200606	B
KR 2006063787	A	20060612	WO 2005JP9121	A	20050519	200674	E
			KR 2005722292	A	20051122		
EP 1767153	A1	20070328	EP 2005741527	A	20050519	200725	E
			WO 2005JP9121	A	20050519		
US 20070112271	A1	20070517	WO 2005JP9121	A	20050519	200734	E
			US 2005559881	A	20051207		

CN 1964669	A	20070516	CN 200580018894	A	20050519	200763	E
KR 657883	B1	20061214	WO 2005JP9121	A	20050519	200765	E
			KR 2005722292	A	20051122		

Priority Applications (no., kind, date): JP 2004172231 A 20040610

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2005120356	A1	JA	20	5		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					

Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
KR 2006063787	A	KO			PCT Application	WO 2005JP9121
					Based on OPI patent	WO 2005120356
EP 1767153	A1	EN			PCT Application	WO 2005JP9121
					Based on OPI patent	WO 2005120356
Regional Designated States,Original	DE FR GB					
US 20070112271	A1	EN			PCT Application	WO 2005JP9121
KR 657883	B1	KO			PCT Application	WO 2005JP9121
					Previously issued patent	KR 2006063787
					Based on OPI patent	WO 2005120356

Alerting Abstract WO A1

NOVELTY - The ultrasonic probe has an ultrasonic transceiver (101) accommodated in a packing case (105) which is filled with an acoustic medium (106) such as 1,2-butylene glycol, at temperature condition of 10-40 (deg)C.

USE - Ultrasonic probe used for ultrasonic diagnosing device.

ADVANTAGE - Since acoustic medium of acoustic impedance nearer to that of human ear, and ultrasonic attenuation is less, transmission and reception of high sensitive ultrasonic wave is performed reliably. Since the acoustic medium of low viscosity is used smooth and high speed drive of ultrasonic transceiver, is achieved.

DESCRIPTION OF DRAWINGS - The figure shows a sectional view of the ultrasonic probe.

101 ultrasonic transceiver

102 drive shaft
103 joining frame
104 window
105 packing case
106 acoustic medium

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; DIAGNOSE; DEVICE; TRANSCEIVER; ACCOMMODATE; PACK; CASE; FILLED; ACOUSTIC; MEDIUM

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	F	B	20060101
A61B-0008/00	A	I		R	20060101
A61B-0008/14	A	I	F	B	20060101
G01N-0029/24	A	I	F	V	20060101
G01N-0029/28	A	I	F	B	20060101
G10K-0011/02	A	I		R	20060101
A61B-0008/00	C	I	F	B	20060101
A61B-0008/00	C	I		R	20060101
A61B-0008/14	C	I		B	20060101
G10K-0011/00	C	I		R	20060101
G01N-0029/24	C	I		V	20060101
G01N-0029/28	C	I		B	20060101

US Classification, Issued: 600459

File Segment: EngPI; EPI;
DWPI Class: S05; V06; P31
Manual Codes (EPI/S-X): S05-D03A1; V06-L06

8/5/26 (Item 26 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0014967190 & & *Drawing available*

WPI Acc no: 2005-314996/200532
XRPX Acc No: N2005-257588
Ultrasonic probe of ultrasonic diagnosis device, has piezoelectric elements on back load to which heat dissipation unit is connected for dissipating heat transferred from heat transfer sheet embedded in load
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: SAITO K; SAITO T; TAKEDA J

Patent Family (5 patents, 106 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2005030055	A1	20050407	WO 2004JP14770	A	20040930	200532	B
JP 2005103078	A	20050421	JP 2003342274	A	20030930	200532	E
EP 1671588	A1	20060621	EP 2004773644	A	20040930	200643	E
			WO 2004JP14770	A	20040930		
CN 1859871	A	20061108	CN 200480028399	A	20040930	200720	E
US 20070276248	A1	20071129	WO 2004JP14770	A	20040930	200780	E
			US 2006573686	A	20060327		

Priority Applications (no., kind, date): JP 2003342274 A 20030930

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
WO 2005030055	A1	JA	30	8	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW				
Regional Designated States,Original	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				
JP 2005103078	A	JA	13		

EP 1671588	A1	EN			PCT Application	WO 2004JP14770
					Based on OPI patent	WO 2005030055
Regional Designated States,Original	DE					
US 20070276248	A1	EN			PCT Application	WO 2004JP14770

Alerting Abstract WO A1
NOVELTY - The probe has piezoelectric elements on back load, ground electrodes on both surfaces of element, and signal terminals for picking up signal at each signal electrodes of element. The back load holding elements through signal electrodes, attenuates unnecessary ultrasonic signal. The heat dissipation unit is connected to load for dissipating heat transferred from the heat transfer sheets embedded in the load.
USE - Ultrasonic probe of ultrasonic diagnosis device.
ADVANTAGE - Enhances the heat dissipation effect and boosts the transmission voltage of the ultrasonic diagnosis device, while enabling an extended depth of the diagnosis.
DESCRIPTION OF DRAWINGS - The figure shows a perspective view of the ultrasonic probe. (Drawing includes non-English language text).

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; DIAGNOSE; DEVICE; PIEZOELECTRIC; ELEMENT; BACK; LOAD; HEAT; DISSIPATE; UNIT; CONNECT; TRANSFER; SHEET; EMBED

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	F	B	20060101
A61B-0008/00	A	I	L	R	20060101
G01N-0029/24	A	I	F	R	20060101
A61B-0008/00	C	I	F	B	20060101
A61B-0008/00	C	I	L	R	20060101
G01N-0029/24	C	I	F	R	20060101
A61B-0008/00	C	I		B	20060101

US Classification, Issued: 600459.0

File Segment: EngPI; EPI;
DWPI Class: S03; S05; V06; P31
Manual Codes (EPI/S-X): S03-E08E; S03-E08X; S05-D03A; V06-L01A1; V06-L06

8/5/44 (Item 44 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0012964802 & & *Drawing available*
WPI Acc no: 2003-042003/200304

XRAM Acc no: C2003-010285
XRPX Acc No: N2003-032940
Piezocomposite for ultrasonic probe of ultrasonic diagnostic equipment, comprises composite sheet units including sintered piezoelectric thin wires arranged in uniform direction on surface of resin layer
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: IGAKI E; NAGAHARA H; SAITO K; SAITO T; SHIRAISHI S; TAKAHARA N

Patent Family (6 patents, 28 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1227525	A2	20020731	EP 20021590	A	20020123	200304	B
US 20020130590	A1	20020919	US 200255640	A	20020122	200304	E
JP 2003070096	A	20030307	JP 20027905	A	20020116	200327	E
US 6873090	B2	20050329	US 200255640	A	20020122	200522	E
US 20050156490	A1	20050721	US 200255640	A	20020122	200548	E
			US 200542377	A	20050124		
JP 3849976	B2	20061122	JP 20027905	A	20020116	200679	E

Priority Applications (no., kind, date): JP 200117559 A 20010125; JP 2001176026 A 20010611

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 1227525	A2	EN	46	24		
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2003070096	A	JA	24			
US 20050156490	A1	EN			Division of application	US 200255640
					Division of patent	US 6873090
JP 3849976	B2	JA	36		Previously issued patent	JP 2003070096

Alerting Abstract EP A2
NOVELTY - A piezocomposite comprises laminated composite sheet units. Each sheet unit includes a resin layer (22) and sintered piezoelectric thin wires (33) arranged in a uniform direction on a surface of the resin layer so that the sintered piezoelectric thin wires are positioned between the resin layers and cut perpendicular to a lengthwise direction of the sintered piezoelectric thin wires.
DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

A. an ultrasonic probe comprising the piezocomposite interposed between an acoustic matching layer and a backing component; a grounded electrode and a driving electrode which is connected with a transmitting/receiving circuit;

B. an ultrasonic diagnostic equipment comprising the ultrasonic probe and an ultrasonic diagnostic equipment main body including a transmitting section and a receiving section, a controlling section, an image forming section, and an image display device; and

C. a method for producing the piezocomposite by preparing two pieces of resin layers each having sintered piezoelectric thin wires are arranged in a uniform direction; laminating the two resin layers so that the sintered piezoelectric thin wires provided on the surface of one of the resin layers are positioned between the wires provided on a surface of the other resin layer and integrating the resin layers to form a composite sheet unit; repeating the above steps several times to form composite sheet units; laminating the composite sheet units so that the sintered piezoelectric thin wires are provided in parallel; and integrating the composite sheet units.

USE - For use in an ultrasonic probe of an ultrasonic diagnostic equipment.
ADVANTAGE - The invention provides a highly reliable piezocomposite having a fine structure at low cost.
DESCRIPTION OF DRAWINGS - The figure shows a step of impregnating a resin in void portions after lamination and integration and curing the resin.
22 Resin layer
23 Resin-impregnated-cured portions
33 Wires

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; DIAGNOSE; EQUIPMENT; COMPRISE; COMPOSITE; SHEET; UNIT; SINTER; PIEZOELECTRIC; THIN; WIRE; ARRANGE; UNIFORM; DIRECTION; SURFACE; RESIN; LAYER

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I	F	R	20060101
H01L-0041/08	A	I	L	R	20060101
H01L-0041/09	A	I	L	R	20060101
H01L-0041/22	A	I		R	20060101
H01L-0041/26	A	I	L	R	20060101
H04R-0017/00	A	I	L	R	20060101
A61B-0008/00	A	I	L	B	20060101
H01L-0041/08	A	I	L	B	20060101
H01L-0041/09	A	I	L	B	20060101
H01L-0041/26	A	I	L	B	20060101

H04R-0017/00	A	I	F	B	20060101	
A61B-0008/00	C	I	L	R	20060101	
B06B-0001/06	C	I		R	20060101	
G01N-0029/24	C	I	F	R	20060101	
H01L-0041/08	C	I	L	R	20060101	
H01L-0041/09	C	I	L	R	20060101	
H01L-0041/22	C	I	L	R	20060101	
H01L-0041/22	C	I		R	20060101	
H04R-0017/00	C	I	L	R	20060101	
H01L-0041/22	C	I	L	B	20060101	

US Classification, Issued: 310334, 310328, 2925.35, 310334

File Segment: CPI; EngPI; EPI
DWPI Class: A89; S03; U11; V06; P31; P43
Manual Codes (EPI/S-X): S03-E08X; U11-A02; V06-B03; V06-L01A; V06-L02
Manual Codes (CPI/A-N): A12-E15; A12-V03C2

8/5/46 (Item 46 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0012302475 & & *Drawing available*
WPI Acc no: 2002-243738/200230
XRAM Acc no: C2002-073340
XRPX Acc No: N2002-188623
Acoustic lens for ultrasonic probe useful in a fish finder, is formed by vulcanization through addition of vulcanizing agent to a composition comprising silica particles and silicone rubber with dimethylpolysiloxane structure
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: FUKASE H; FUKASE K; SAITO K; SAITO T

Patent Family (5 patents, 29 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1172801	A2	20020116	EP 2001103277	A	20010213	200230	B
CA 2338036	A1	20020113	CA 2338036	A	20010226	200230	E

US 20020006079	A1	20020117	US 2001782862	A	20010214	200230	E
JP 2002095081	A	20020329	JP 200127392	A	20010202	200238	E

US 6418084	B2	20020709	US 2001782862	A	20010214	200253	E

Priority Applications (no., kind, date): JP 2000212453 A 20000713

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 1172801	A2	EN	10	4	
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR				
CA 2338036	A1	EN			
JP 2002095081	A	JA	7		

Alerting Abstract EP A2

NOVELTY - An acoustic lens (I) is formed in an acoustic lens shape by vulcanization formation through addition of 2,5-dimethyl-2,5-di-t-butyl peroxy hexane as a vulcanizing agent to a composition prepared by addition of 40-50 wt.% silica (SiO_2) particles to silicone rubber with a dimethylpolysiloxane structure including vinyl groups.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

3. a method of forming (I) by press molding or cast molding;

4. an ultrasonic probe comprising:

A. a piezoelectric element for transmitting and receiving ultrasonic waves; and

B. an acoustic lens provided on an ultrasonic transmission/reception side of the piezoelectric element; and

5. a method of manufacturing an ultrasonic probe.

USE - The ultrasonic probe is used in a fish finder, ultrasonic diagnostic equipment for living bodies, etc.

ADVANTAGE - The acoustic lens used in the ultrasonic probe improves the ultrasonic transmission and reception sensitivity and also diminishes the degradation in frequency characteristics.

DESCRIPTION OF DRAWINGS - Figure is a schematic sectional view of the ultrasonic probe.

1 element
2 electric terminals
3 acoustic lens

Title Terms /Index Terms/Additional Words: ACOUSTIC; LENS; ULTRASONIC; PROBE; USEFUL; FISH; FINDER; FORMING; VULCANISATION; THROUGH; ADD; AGENT; COMPOSITION; COMPRISE; SILICA; PARTICLE; SILICONE; RUBBER;

STRUCTURE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	F	R	20060101
G01S-0007/521	A	I	L	R	20060101
G10K-0011/30	A	I		R	20060101
H04R-0001/34	A	I	L	R	20060101
H04R-0017/00	A	I	L	R	20060101
H04R-0031/00	A	I	L	R	20060101
A61B-0008/00	C	I	F	R	20060101
G01S-0007/521	C	I	L	R	20060101
G10K-0011/00	C	I		R	20060101
H04R-0001/32	C	I	L	R	20060101
H04R-0017/00	C	I	L	R	20060101
H04R-0031/00	C	I	L	R	20060101

US Classification, Issued: 367150, 367152, 367150, 3677

File Segment: CPI; EngPI
DWPI Class: A26; A32; A89; P86
Manual Codes (CPI/A-N): A06-A00E2; A08-C05; A08-R06A; A11-B01; A11-C02A; A11-C02D; A12-E12; A12-E13

^8/5/47 (Item 47 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0010983674 & & *Drawing available*
WPI Acc no: 2001-608217/200170
XRAM Acc no: C2001-180898
XRPX Acc No: N2001-454119
Ultrasonic probe for ultrasonic diagnostic apparatus for human body, includes high molecular material layer disposed between piezoelectric element and acoustic matching layer
Patent Assignee: FUKASE H (FUKA-I); KOISHIHARA Y (KOIS-I); MATSUSHITA

DENKI SANGYO KK (MATU) ; MATSUSHITA ELECTRIC IND CO LTD (MATU);
SAITO K (SAIT-I); TAKEDA J (TAKE-I)
Inventor: FUKASE H; FUKASE K; KOISHIHARA Y; SAITO K; SAITO T; TAKEDA J

Patent Family (11 patents, 29 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1132149	A2	20010912	EP 2001301672	A	20010223	200170	B
CA 2332158	A1	20010907	CA 2332158	A	20010125	200170	E
JP 2001245883	A	20010911	JP 200061348	A	20000307	200170	E
US 20010021807	A1	20010913	US 2001777670	A	20010207	200170	E
JP 2001275191	A	20011005	JP 200088675	A	20000328	200173	E
JP 2001276060	A	20011009	JP 200090880	A	20000329	200174	E
JP 2001285996	A	20011012	JP 200093313	A	20000330	200176	E
US 6551247	B2	20030422	US 2001777670	A	20010207	200330	E
CA 2332158	C	20040914	CA 2332158	A	20010125	200461	E
JP 3595755	B2	20041202	JP 200088675	A	20000328	200480	E
JP 3656016	B2	20050602	JP 200090880	A	20000329	200537	E

Priority Applications (no., kind, date): JP 200061348 A 20000307; JP 200088675 A 20000328; JP 200090880 A 20000329; JP 200093313 A 20000330

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 1132149	A2	EN	33	18		
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
CA 2332158	A1	EN				
JP 2001245883	A	JA	7			
JP 2001275191	A	JA	7			
JP 2001276060	A	JA	7			
JP 2001285996	A	JA	7			
CA 2332158	C	EN				
JP 3595755	B2	JA	9		Previously issued patent	JP 2001275191
JP 3656016	B2	JA	9		Previously issued patent	JP 2001276060

Alerting Abstract EP A2
NOVELTY - An ultrasonic probe has a high molecular material layer (11) disposed between one electrode face of piezoelectric element (1) and acoustic matching layer (7). A conductive layer (10) is electrically connected to the electrode face of the piezoelectric element. The acoustic impedance of the high molecular material layer is equal to that of the acoustic matching layer.

USE - For ultrasonic diagnostic apparatus for a human body.
ADVANTAGE - The inventive ultrasonic probe provides diagnostic information based on highly accurate ultrasonic image by simultaneously optimizing acoustic matching condition and electrical conductive path. It has acoustic impedance equal to that of the acoustic matching layer, and does not deteriorate the performance including sensitivity and frequency characteristics. The performance of which is not degraded even if the piezoelectric element is cracked by a mechanical impact.
DESCRIPTION OF DRAWINGS - The figure is a cross sectional view of the inventive ultrasonic probe.
1 Piezoelectric element
7 Acoustic matching layer
9 Backing material
10 Conductive layer
11 High molecular material layer

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; DIAGNOSE; APPARATUS; HUMAN; BODY; HIGH; MOLECULAR; MATERIAL; LAYER; DISPOSABLE; PIEZOELECTRIC; ELEMENT; ACOUSTIC; MATCH

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	F	R	20060101
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I	F	R	20060101
G10K-0011/02	A	I		R	20060101
H04R-0017/00	A	I	L	R	20060101
A61B-0008/00	C	I	F	R	20060101
A61B-0008/00	C	I	L	R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/24	C	I	F	R	20060101
G10K-0011/00	C	I		R	20060101
H04R-0017/00	C	I	L	R	20060101

US Classification, Issued: 600437, 600459, 600459, 600463, 310334, 310335, 310322, 310323

File Segment: CPI; EngPI
DWPI Class: A96; P31; P43; P86
Manual Codes (CPI/A-N): A12-E13; A12-E15; A12-V03C2

8/5/59 (Item 59 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0009160791 & & *Drawing available*
WPI Acc no: 1999-083348/199908
XRPX Acc No: N1999-060146
Ultrasound guided blood vessel puncturing device - has ultrasound sensor with processor to form image of body and puncture needle, which pierces skin at angle smaller than 30 degrees along sensor scanning surface
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: KAWABUCHI M; NIBUYA T; SAITO K; SAITO T; TOMISAWA S; TOMIZAWA N

Patent Family (7 patents, 28 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 891743	A1	19990120	EP 1998113093	A	19980714	199908	B
JP 11033026	A	19990209	JP 1997188466	A	19970714	199916	E
CA 2240757	A	19990114	CA 2240757	A	19980713	199926	E
JP 11151244	A	19990608	JP 1997334788	A	19971120	199933	E
US 6068599	A	20000530	US 1998114184	A	19980713	200033	E
CA 2240757	C	20010828	CA 2240757	A	19980713	200154	E
JP 3321401	B2	20020903	JP 1997334788	A	19971120	200264	E

Priority Applications (no., kind, date): JP 1997188466 A 19970714; JP 1997334788 A 19971120

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 891743	A1	EN	13	7		
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 11033026	A	JA	5			
CA 2240757	A	EN				
JP 11151244	A	JA	5			
CA 2240757	C	EN				
JP 3321401	B2	JA	5		Previously issued patent	JP 11151244

Alerting Abstract EP A1
The device includes an ultrasound sensor (1) for transmitting and receiving an ultrasound wave to and from a subject body (4). A processor (2) processes a signal derived from the ultrasound wave received at the sensor to display an image of the body.
An ultrasound propagation gel (3) is interposed between the sensor and the body. A puncturing needle (6) is stuck into the body at an angle, which is not greater than 30(deg) relative to the body along an ultrasound scanning surface (8) of the sensor.
USE - To enable easy and accurate insertion of puncturing needle into blood vessel.
ADVANTAGE - Is free of deformation of superficial blood vessel of subject body and makes it possible to insert needle in blood vessel easily and precisely.

Title Terms /Index Terms/Additional Words: ULTRASONIC; GUIDE; BLOOD; VESSEL; PUNCTURE; DEVICE; SENSE; PROCESSOR; FORM; IMAGE; BODY; NEEDLE; PIERCE; SKIN ; ANGLE; SMALLER; DEGREE; SCAN; SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-008/00; A61B-008/02; A61B-008/06; A61B-008/08; A61B-008/12			Main		"Version 7"
A61B-017/34; A61M-025/01			Secondary		"Version 7"

US Classification, Issued: 600454, 600461

File Segment: EngPI; EPI;
DWPI Class: S05; P31; P34
Manual Codes (EPI/S-X): S05-B04A; S05-D03B; S05-G02B

8/5/91 (Item 91 from file: 350)
Fulltext available through: Order File History

0005232877 & & *Drawing available*
WPI Acc no: 1990-225846/199030
Related WPI Acc No: 1987-004411; 1987-004412; 1987-030933
XRPX Acc No: N1990-175290
Ultrasonic probe for medical diagnostics appts. - has electrical terminal connection portion of piezoelectric ceramic material divided at same intervals as in array of

electrodes
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUSHI M; SAITO K

Patent Family (3 patents, 2 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 379229	A	19900725	EP 1990104329	A	19860520	199030	B
EP 379229	B1	19940727	EP 1986303833	A	19860520	199429	E
			EP 1990104329	A	19860520		
DE 3650004	G	19940901	DE 3650004	A	19860520	199434	E
			EP 1990104329	A	19860520		

Priority Applications (no., kind, date): JP 1985107355 A 19850520; JP 1985107356 A 19850520; JP 1985162404 A 19850723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 379229	A	EN				
Regional Designated States,Original	DE FR GB					
EP 379229	B1	EN	11	8	Related to application	EP 1986303833
Regional Designated States,Original	DE FR GB					
DE 3650004	G	DE			Application	EP 1990104329
					Based on OPI patent	EP 379229

Alerting Abstract EP A
The ultrasonic probe uses a compound piezoelectric material made of piezoelectric ceramic and organic polymer. On one principal plane of the compound piezoelectric material (1), electrodes (4) and electric terminals (7) conducting to these electrodes (4) are formed, and these electrodes (4) and electric terminals (7) are divided. On the other principal plane of the compound piezoelectric material (1), a common electrode (5) is provided, and an acoustic matching layer (10) is mounted on it, either intact or divided, in correspondence to the divided electrodes (4).
By using part of the compound piezoelectric material (1) as the electric terminal connection portion (10) in another embodiment, the mechanical strength of the electric terminal connection portion can be improved, which is particularly preferable for the ultrasonic probe driven at high frequency.
ADVANTAGE - Enhanced orientation resolution.

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; MEDICAL; DIAGNOSE; APPARATUS; ELECTRIC; TERMINAL; CONNECT; PORTION;

PIEZOELECTRIC; CERAMIC; MATERIAL; DIVIDE; INTERVAL; ARRAY; ELECTRODE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
G01N-029/24			Main		"Version 7"
A61B-008/00			Secondary		"Version 7"
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I		R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/24	C	I		R	20060101

File Segment: EngPI; EPI;
DWPI Class: S03; S05; V06; P31
Manual Codes (EPI/S-X): S03-E08X; S05-D03; V06-L01A1

8/5/92 (Item 92 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0005195671 & & *Drawing available*
WPI Acc no: 1990-187028/199025
XRPX Acc No: N1990-145472
Ultrasonic probe for generating B-mode image of examined object - includes piezoelectric elements with concave surfaces whose radii of curvature increases as elements are further from innermost place
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; SAITO K; SAITO T; SAKAI I; TANAKA H

Patent Family (4 patents, 3 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 373603	A	19900620	EP 1989122956	A	19891212	199025	B
JP 2159266	A	19900619	JP 1988315422	A	19881214	199030	E
EP 373603	B1	19950308	EP 1989122956	A	19891212	199514	E
DE 68921571	E	19950413	DE 68921571	A	19891212	199520	E
			EP 1989122956	A	19891212		

Priority Applications (no., kind, date): JP 1988315422 A 19881214

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 373603	A	EN				
Regional Designated States,Original	DE FR GB					
EP 373603	B1	EN	13	6		
Regional Designated States,Original	DE FR GB					
DE 68921571	E	DE			Application	EP 1989122956
					Based on OPI patent	EP 373603

Alerting Abstract EP A

The ultrasonic probe includes a piezoelectric element array (1) of a six-segment type. The piezoelectric element array (1) has a central disc piezoelectric element (2A) and ring piezoelectric elements (2B, 2C, 2D, 2E, 2F) concentrically extending around the central piezoelectric element (2A). During a scanning process, the piezoelectric element array (1) is mechanically moved within liquid in a direction perpendicular to its axis. The piezoelectric elements (2A-2F) are separated by annular gaps (3). The piezoelectric element array (1) has a concave front surface (4) via which ultrasonic wave beams are transmitted and received. The concave design of the transmission/reception surface (4) functions to structurally focus the ultrasonic wave beams.

Specifically, front surfaces (4A-4F) of the respective piezoelectric elements (2A-2F) form the transmission/reception surface (4). The surfaces (4A-4F) are spherically concave and have predetermined different radii (ra, rb, rc, rd, re, rf) of curvature respectively. In general, the radius of curvature of the transmission/reception surface of a piezoelectric element determines the structural focal point of the piezoelectric element. @(11pp Dwg.No.1/6)@

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; GENERATE; MODE; IMAGE; OBJECT; PIEZOELECTRIC; ELEMENT; CONCAVE; SURFACE; RADIUS; CURVE; INCREASE; INNER; PLACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
B06B-001/06			Main		"Version 7"
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I	F	R	20060101
G10K-0011/32	A	I		R	20060101

H04R-0017/00	A	I	L	R	20060101	
A61B-0008/00	C	I	L	R	20060101	
B06B-0001/06	C	I		R	20060101	
G01N-0029/24	C	I	F	R	20060101	
G10K-0011/00	C	I		R	20060101	
H04R-0017/00	C	I	L	R	20060101	

File Segment: EngPI; EPI;
DWPI Class: S03; V06; P31; P43; P86
Manual Codes (EPI/S-X): S03-E08; V06-L01A1

8/5/93 (Item 93 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0005189487 & & *Drawing available*
WPI Acc no: 1990-180410/199024
XRPX Acc No: N1990-140223
Ultrasonic probe for generating B-mode image - includes two groups of piezoelectric elements, areas of elements in first group being equal to half of respective areas in second groups
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; SAITO K; SAKAI I; TANAKA H

Patent Family (4 patents, 3 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 372589	A	19900613	EP 1989122853	A	19891211	199024	B
US 4961176	A	19901002	US 1989447491	A	19891207	199042	E
EP 372589	B1	19940601	EP 1989122853	A	19891211	199421	E
DE 68915712	E	19940707	DE 68915712	A	19891211	199427	E
			EP 1989122853	A	19891211		

Priority Applications (no., kind, date): JP 1988312227 A 19881209

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 372589	A	EN			
Regional Designated States,Original	DE FR GB				

EP 372589	B1	EN	11	0		
Regional Designated States,Original	DE FR GB					
DE 68915712	E	DE			Application	EP 1989122853
					Based on OPI patent	EP 372589

Alerting Abstract EP A

The probe includes a group of one or more piezoelectric elements extending concentrically and a second group of one or more piezoelectric elements extending concentrically and outward of the elements in the first group. The elements in the two groups form a front surface via which ultrasonic wave is transmitted and received. The elements in the two groups are separated by predetermined gaps.

Areas of the respective elements in the second group over the front surface are equal to each other within an accuracy corresponding to areas of the gaps over the front surface. Areas of the respective elements in the first group over the front surface are equal to half the areas of the respective elements in the second group within an accuracy corresponding to the areas of the gaps.

ADVANTAGE - Improves balance of ultrasonic wave beam. @(9pp Dwg.No.1/5)@

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; GENERATE; MODE; IMAGE; TWO; GROUP; PIEZOELECTRIC; ELEMENT; AREA; FIRST; EQUAL; HALF; RESPECTIVE; SECOND

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
B06B-001/06			Main		"Version 7"
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I	F	R	20060101
A61B-0008/00	C	I	L	R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/24	C	I	F	R	20060101

US Classification, Issued: 367155, 12824.R, 128660.01, 128660.09, 310334, 310369

File Segment: EngPI; EPI;
DWPI Class: S03; V06; P43
Manual Codes (EPI/S-X): S03-E08; V06-B03; V06-L01A2

8/5/98 (Item 98 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0004976697 & & *Drawing available*
WPI Acc no: 1989-372160/198951
Manufacture of convex type ultrasonic probe - using laminated body including piezoelectric array, placing body against curved surface, and tensioning pressing film to deform body
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; SAITO K; SAITO T

Patent Family (5 patents, 4 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 346891	A	19891220	EP 1989110831	A	19890614	198951	B
JP 2002300	A	19900108	JP 1988147455	A	19880615	199007	E
US 5042493	A	19910827	US 1989365405	A	19890613	199137	E
EP 346891	B1	19940914	EP 1989110831	A	19890614	199435	E
DE 68918165	E	19941020	DE 68918165	A	19890614	199441	E
			EP 1989110831	A	19890614		

Priority Applications (no., kind, date): JP 1988147455 A 19880615

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 346891	A	EN	11	8		
Regional Designated States,Original	DE FR GB					
EP 346891	B1	EN	13	8		
Regional Designated States,Original	DE FR GB					
DE 68918165	E	DE			Application	EP 1989110831
					Based on OPI patent	EP 346891

Alerting Abstract EP A
A convex type ultrasonic probe is manufactured by forming a laminated body including a backing layer (8), a piezoelectric element bearing electrode films, and a first acoustic

matching layer (7). The body is segmented by cutting grooves therein to form a piezoelectric array. The backing layer of the body is placed against an aluminium member (11) having a part cylindrical surface extending over an arc of about 270 degrees.
Tension is applied to the two ends of a pressing film (15) applied to the body outer surface, to shape the latter to the curvature of the member (11). Alternatively, the tension may be applied to one of the the layers of the body.
ADVANTAGE - Permits manufacture of convex type probe convex arc of which exceeds 180 degrees.

Title Terms /Index Terms/Additional Words: MANUFACTURE; CONVEX; TYPE; ULTRASONIC ; PROBE; LAMINATE; BODY; PIEZOELECTRIC; ARRAY; PLACE; CURVE; SURFACE; TENSION; PRESS; FILM; DEFORM

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
B06B-001/06			Main		"Version 7"
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/24	A	I	F	R	20060101
H04R-0017/00	A	I	L	R	20060101
A61B-0008/00	C	I	L	R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/24	C	I	F	R	20060101
H04R-0017/00	C	I	L	R	20060101

US Classification, Issued: 128662.03, 2925.35, 310369

File Segment: EngPI; EPI;
DWPI Class: S05; V06; P11; P31; P43
Manual Codes (EPI/S-X): S05-D03; V06-B03; V06-L01A1

8/5/112 (Item 112 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0003940440
WPI Acc no: 1987-030933/198705
Related WPI Acc No: 1987-004411; 1990-225846; 1987-004412

XRAM Acc no: C1987-013083
XRPX Acc No: N1987-023417
Ultrasonic probe for medical use - uses a cpd. material of piezoelectric ceramic and polymer with a divided electrode array on one surface
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; KAWABUSHI M; SAITO K

Patent Family (5 patents, 5 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 210723	A	19870204	EP 1986303833	A	19860520	198705	B
JP 62022634	A	19870130	JP 1985107356	A	19850520	198710	E
			JP 1985162404	A	19850723		
EP 210723	B	19910410	EP 1986303833	A	19860520	199115	E
DE 3678635	G	19910516				199121	E
US 5030874	A	19910709	US 1989455797	A	19891228	199130	E

Priority Applications (no., kind, date): JP 1985107386 A 19850520; JP 1985107356 A 19850520; JP 1985107355 A 19850520; JP 1985162404 A 19850723

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 210723	A	EN	22	8	
Regional Designated States,Original	DE FR GB				
EP 210723	B	EN		8	
Regional Designated States,Original	DE FR GB				

Alerting Abstract EP A
Ultrasonic probe comprises a piezoelectric material consisting of a piezoelectric ceramic (2) and organic polymer (3), with electrodes (4) divided into plural form on the surface.
Pref. a common electrode (5), an acoustic matching layer (10) and an acoustic lens (11) are provided on the opposite surface. The ceramic (2) is pref. a two component (PZT) or three component (PCM) piezoelectric material stretched in one dimension; and the polymer (3) is an epoxy stretched in three dimensions, the ceramic to polymer vol. ratio being 1:3.
USE/ADVANTAGE - In diagnostic medicine. Probe is capable of picking up electrical terminals easily and has enhanced reliability and orientation resolution.

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; MEDICAL; COMPOUND; MATERIAL; PIEZOELECTRIC; CERAMIC; POLYMER; DIVIDE; ELECTRODE; ARRAY; ONE; SURFACE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-008/00			Main		"Version 7"
G01N-029/00; H01L-041/08; H04R-017/00			Secondary		"Version 7"

US Classification, Issued: 310334, 310358, 310366, 310800

File Segment: CPI; EngPI; EPI
DWPI Class: A96; S03; S05; V06; P31
Manual Codes (EPI/S-X): S03-E08; S05-D03; V06-L01
Manual Codes (CPI/A-N): A05-A01E; A05-A01E2; A12-E12; A12-E13; A12-V03C2

^8/5/113 (Item 113 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0003763990
WPI Acc no: 1986-213683/198633
XRAM Acc no: C1986-091921
XRPX Acc No: N1986-159549
Ultrasonic probe with piezoelectric vibrators - has backing and acoustic matching layers of microsphere and powder filled resin
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; SAITO K; SAITO T

Patent Family (5 patents, 4 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 190948	A	19860813	EP 1986300880	A	19860210	198633	B
JP 61184099	A	19860816	JP 198523875	A	19850208	198644	E
			JP 198523877	A	19850208		
JP 61184100	A	19860816	JP 198523876	A	19850208	198647	E
			JP 198523877	A	19850208		
EP 190948	B	19920122	EP 1986300880	A	19860210	199204	E
DE 3683509	G	19920305				199211	E

Priority Applications (no., kind, date): JP 198523875 A 19850208; JP 198523876 A 19850208; JP 198523877 A 19850208

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 190948	A	EN	21	5	
Regional Designated States,Original	DE FR GB				
EP 190948	B	EN			
Regional Designated States,Original	DE FR GB				

Alerting Abstract EP A

A probe comprises vibrators (1) arranged in sequence, each with electrodes (8,9) secured to both surfaces, a backing load member (2) on the surface of one electrode, and first (3layers) and second (6) acoustic matching on the other electrode, with filler material (5) between the vibrators. The backing member is pref. epoxy resin mixed with tungsten powder and plastic microspheres, the first matching layer is of epoxy resin mixed with carbonyl iron, and the filler is of silicone, polyurethane, butyl or chloroprene rubber or epoxy or polyurethane resin, mixed with plastic microspheres and silicon carbide powder. The vibrators may be arranged in a straight line, an arc or a matrix.

ADVANTAGE - Is small in size and lightweight, the matching layer has high mechanical strength to prevent damage, and the probe produces high resolution images by reducing crosstalk between the piezoelectric elements.

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; PIEZOELECTRIC; VIBRATION; BACKING; ACOUSTIC; MATCH; LAYER; MICROSPHERE; POWDER; FILLED; RESIN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
H04R-0001/22	A	I	L	R	20060101
H04R-0001/34	A	I	F	R	20060101
H04R-0017/00	A	I	F	R	20060101
H04R-0017/00	A	I	L	R	20060101
A61B-0008/00	C	I	L	R	20060101
B06B-0001/06	C	I		R	20060101
H04R-0001/22	C	I	L	R	20060101
H04R-0001/32	C	I	F	R	20060101
H04R-0017/00	C	I	F	R	20060101
H04R-0017/00	C	I	L	R	20060101

File Segment: CPI; EngPI; EPI
DWPI Class: A85; L03; S05; V06; P86

Manual Codes (EPI/S-X): S05-D03; V06-B03; V06-L01
Manual Codes (CPI/A-N): A05-A01E2; A08-M09A; A08-R05; A12-E13; A12-E15; L03-D04D

8/5/114 (Item 114 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0003724738
WPI Acc no: 1986-170807/198627
Ultrasonic imaging system for sector-scanned multiple images - is for simultaneous display and reads out echo samples at constant speed in directions of rows and columns
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: FUKUKITA H; SAITO K; UENO S; YANO T

Patent Family (4 patents, 4 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 186290	A	19860702	EP 1985308138	A	19851106	198627	B
US 4722345	A	19880202	US 1985796519	A	19851108	198808	E
EP 186290	B	19920115	EP 1985308138	A	19851108	199203	E
DE 3585218	G	19920227				199210	E

Priority Applications (no., kind, date): JP 1984236133 A 19841109; JP 1984269076 A 19841219; JP 1984269760 A 19841220; JP 1984277902 A 19841226

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 186290	A	EN	30	15	
Regional Designated States,Original	DE FR GB				
EP 186290	B	EN			
Regional Designated States,Original	DE FR GB				

Alerting Abstract EP A
The system samples echo signals representative of the amplitude of ultrasonic energy returning along several angularly spaced paths using an A=D converter. The signals are sampled at a constant rate and stored in a buffer memory. The samples are read out of the buffer memory at a speed inversely proportional to the cosine of the angle of the path w.r.t. a reference line.
At a constant speed samples are read out of the graphic memory in the direction of the rows and columns and applied to a monitor to be displayed in a raster scan field.

Title Terms /Index Terms/Additional Words: ULTRASONIC; IMAGE; SYSTEM; SECTOR; SCAN; MULTIPLE; SIMULTANEOUS; DISPLAY; READ; ECHO; SAMPLE; CONSTANT; SPEED; DIRECTION; ROW; COLUMN

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
G01S-0007/52	A	I		R	20060101
G01S-0007/531	A	I		R	20060101
G09G-0005/14	A	I		R	20060101
G01S-0007/52	C	I		R	20060101
G01S-0007/523	C	I		R	20060101
G09G-0005/14	C	I		R	20060101

US Classification, Issued: 128660.09, 358112

File Segment: EngPI; EPI;
DWPI Class: S05; T04; W06; P85
Manual Codes (EPI/S-X): S05-D03; S05-E; T04-H01; W06-A05

^8/5/119 (Item 119 from file: 350)
Fulltext available through: Order File History

0003358743
WPI Acc no: 1985-124087/198521
XRAM Acc no: C1985-053831
XRPX Acc No: N1985-093301
Ultrasonic probe with piezoelectric vibrator - having magnetic thermosetting resin matching layer directly on one electrode
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; SAITO K; YAMAGUCHI K

Patent Family (4 patents, 5 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 142318	A	19850522	EP 1984307616	A	19841105	198521	B
JP 60100950	A	19850604	JP 1983210103	A	19831109	198528	E
US 4616152	A	19861007	US 1984668214	A	19841105	198643	E

JP 1990039251	B	19900904	JP 1983210103	A	19831109	199039	E

Priority Applications (no., kind, date): JP 1983210103 A 19831109

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
EP 142318	A	EN	13	2	
Regional Designated States,Original	DE FR GB				

Alerting Abstract EP A

Probe comprises a piezoelectric vibrator with electrodes on both surfaces, an acoustic matching layer of thermosetting resin with magnetic material on one electrode, and a second matching layer on the first. The resin is pref. epoxy resin and the first layer is in direct contact with the electrode surface.

A backing load member is pref. formed on the other electrode and consists of ferrite rubber or plastics mixed with tungsten powder. The two layers are pref. formed by pouring the material.

USE/ADVANTAGE - For medical diagnosis, having high efficiency and resolution, with no need for an intermediate layer between electrode and first matching layer.

Title Terms /Index Terms/Additional Words: ULTRASONIC; PROBE; PIEZOELECTRIC; VIBRATION; MAGNETIC; THERMOSETTING; RESIN; MATCH; LAYER; ONE; ELECTRODE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-008/00			Main		"Version 7"
G10K-011/02; H01L-041/08; H04R-001/22; H04R-017/00			Secondary		"Version 7"

US Classification, Issued: 310334, 73644, 310327, 310335, 367152

File Segment: CPI; EngPI; EPI
DWPI Class: A85; L03; S05; V06; P31; P86
Manual Codes (EPI/S-X): S05-D03; V06-L01
Manual Codes (CPI/A-N): A05-A01E2; A12-E; A12-V03C; L03-D04D

8/5/122 (Item 122 from file: 350)
Fulltext available through: Order File History

0003255557
WPI Acc no: 1985-013916/198503
XRAM Acc no: C1985-005652
XRPX Acc No: N1985-009923
Ultrasonic transducer for medical diagnosis - has contact member with reinforcement of 4:methylpentene:1 polymer
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: FUKUMOTO A; KAWABUCHI M; MATSUO K; MURAMATSU F; SAITO K

Patent Family (6 patents, 4 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 130709	A	19850109	EP 1984303835	A	19840606	198503	B
US 4699150	A	19871013	US 1986864563	A	19860516	198743	E
EP 130709	B	19900516	EP 1984303835	A	19840606	199020	E
DE 3482290	G	19900621				199026	E
JP 59225044	A	19841218	JP 1983102025	A	19830607	199038	E
JP 1992046579	B	19920730	JP 1983102025	A	19830607	199235	E

Priority Applications (no., kind, date): JP 1983102025 A 19830607

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 130709	A	EN	22	6		
Regional Designated States,Original	DE FR GB					
EP 130709	B	EN				
Regional Designated States,Original	DE FR GB					
JP 1992046579	B	JA	5	0	Based on OPI patent	JP 59225044

Alerting Abstract EP A
Transducer has an ultrasound emitting surface on which an acoustic impedance matcher (17) is formed, and an object contact member (18) on the matcher and comprising a reinforcement of a 4-methylpentene-1 polymer, pref. polymethylpentene or 4-methylpentene-1 copolymer with olefinic monomer.
The reinforcement may be a thin flat plate or a planoconcave lens formed on the matcher at

the plane side, and the contact member pref. comprises the reinforcement (18a) and an acoustic lens of silicone rubber (18b). The matcher may consist of a single or multiple layer. ADVANTAGE - Provides improved mechanical strength with response characteristics similar to those of conventional transducers.

Title Terms /Index Terms/Additional Words: ULTRASONIC; TRANSDUCER; MEDICAL; DIAGNOSE; CONTACT; MEMBER; REINFORCED; METHYL; PENTENE; POLYMER; SILICONE

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-008/00			Main		"Version 7"
A61B-010/00; G01N-029/04; G10K-011/02; H04R-017/00			Secondary		"Version 7"

US Classification, Issued: 128660.1, 73644, 128663.01

File Segment: CPI; EngPI; EPI
DWPI Class: A18; A96; S05; V06; P31; P86
Manual Codes (EPI/S-X): S05-E; V06-B03
Manual Codes (CPI/A-N): A04-G10; A06-A00E2; A12-E12; A12-V03C

8/5/124 (Item 124 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0003207465
WPI Acc no: 1984-308368/198450
XRAM Acc no: C1984-131460
XRPX Acc No: N1984-229897
Probe for ultrasonic imaging system - comprises piezoelectric transducers backed by energy absorbing material of specified hardness and adsorption coefficient
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: IIJIMA K; IIMIMA K; KAWABUCHI; KAWABUCHI M; SAITO K; SAITO T; YAMAGUCHI K

Patent Family (9 patents, 4 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 128049	A	19841212	EP 1984303872	A	19840607	198450	B
JP 59226600	A	19841219	JP 1983102024	A	19830607	198506	E
			JP 1983102026	A	19830607		
			JP 198465363	A	19840402		
JP 60208196	A	19851019	JP 1983102026	A	19830607	198548	E
			JP 198465363	A	19840402		
US 4571520	A	19860218	US 1984618369	A	19840607	198610	E
JP 59225045	A	19841218	JP 1983102024	A	19830607	199023	E
			JP 1983102026	A	19830607		
			JP 198465363	A	19840402		
JP 1990021253	B	19900514	JP 1983102026	A	19830607	199023	E
EP 128049	B	19900912	EP 1984303872	A	19840607	199037	E
DE 3483174	G	19901018				199043	E
JP 1993038519	B	19930610	JP 198465363	A	19840402	199326	E

Priority Applications (no., kind, date): JP 1983102024 A 19830607; JP 1983102026 A 19830607; JP 198465363 A 19840402

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
EP 128049	A	EN	14	3		

Regional Designated States,Original	DE FR GB						
EP 128049	B	EN					
Regional Designated States,Original	DE FR GB						
JP 1993038519	B	JA	4		Based on OPI patent	JP 60208196	

Alerting Abstract EP A

The ultrasonic probe comprises an array of piezoelectric transducer elements, with a backing member on one surface. This has a Shore-A hardness greater than 85 and an ultrasonic absorption coefft. greater than 1.5 dB/mm at the frequency of energy generated by the array. The acoustic impedance is in the range (1.0-3.0) x 10 power 5 g/sq.cm. sec..

A thermosetting resin layer can be provided between the piezoelectric array and the backing member, which can be methane rubber, or a mixt. of this and microballoons. Metal particles can also be incorporated. The resin is epoxy, polystyrene, polyurethane, polyester or polyethylene.

USE - Probe for ultrasonic imaging system.

Title Terms /Index Terms/Additional Words: PROBE; ULTRASONIC; IMAGE; SYSTEM; COMPRISE; PIEZOELECTRIC; TRANSDUCER; BACK; ENERGY; ABSORB;

MATERIAL; SPECIFIED; HARD; ADSORB; COEFFICIENT

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
H04R-001/22			Main		"Version 7"
A61B-0010/00	A	I		R	20060101
A61B-0008/00	A	I	F	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/04	A	I	L	R	20060101
G01N-0029/04	A	I		R	20060101
G01N-0029/24	A	I	L	R	20060101
G01S-0007/52	A	I	L	R	20060101
G01S-0007/521	A	I	L	R	20060101
G10K-0011/16	A	I		R	20060101
H04R-0001/22	A	I	L	R	20060101
H04R-0017/00	A	I	L	R	20060101
A61B-0010/00	C	I		R	20060101
A61B-0008/00	C	I	F	R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/04	C	I	L	R	20060101
G01N-0029/04	C	I		R	20060101
G01N-0029/24	C	I	L	R	20060101
G01S-0007/52	C	I	L	R	20060101
G01S-0007/521	C	I	L	R	20060101
G10K-0011/00	C	I		R	20060101
H04R-0001/22	C	I	L	R	20060101
H04R-0017/00	C	I	L	R	20060101

US Classification, Issued: 310327, 73632, 310334, 310335

File Segment: CPI; EngPI; EPI
DWPI Class: A85; L03; S05; V06; P31; P86
Manual Codes (EPI/S-X): S05-D03; V06-B03; V06-E02; V06-L01
Manual Codes (CPI/A-N): A12-E12; L03-D04D

8/5/131 (Item 131 from file: 350)
Fulltext available through: Order File History
Derwent WPIX

0002608473
WPI Acc no: 1982-D7489E/198214
Ultrasonic transducer array for diagnostic imaging system - has curved common impedance matching layer facilitating beam focussing
Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)
Inventor: KAWABUCHI M; MURAMATSU F; SAITO K; SAITOH K; SATO J; SATOH J

Patent Family (3 patents, 2 & countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
DE 3119272	A	19820401	DE 3119272	A	19810514	198214	B
DE 3119272	C	19831013	DE 3119272	A	19810514	198342	E
US 4462092	A	19840724	US 1981263739	A	19810514	198432	E

Priority Applications (no., kind, date): JP 198064789 A 19800515

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
DE 3119272	A	DE	20		

Alerting Abstract DE A
The ultrasonic transducer array for accurate scanning comprises a number of transducer elements (12) mounted next to one another on a common impedance matching layer (24) of elastic material. Each transducer element (12) comprises a piezoelectric element (20) with a width expansion oscillation mode and a pair of electrodes (21,22) contacting its top and bottom faces. A block of impedance matching material (23) is inserted between the piezoelectric element (20) and the impedance matching layer (24).
This impedance matching layer is pref. made of a synthetic resin and itis held in a curved condition via a curved frame, so that its surface is convex to the propagation direction of the ultrasonic energy provided by the transducers. The curvature of the impedance matching layer facilitates beam focussing.

Title Terms /Index Terms/Additional Words: ULTRASONIC; TRANSDUCER; ARRAY; DIAGNOSE; IMAGE; SYSTEM; CURVE; COMMON; IMPEDANCE; MATCH; LAYER; FACILITATE ; BEAM; FOCUS

Class Codes

International Patent Classification

IPC	Class Level	Scope	Position	Status	Version Date
A61B-0008/00	A	I	L	R	20060101
B06B-0001/06	A	I		R	20060101
G01N-0029/04	A	I	L	R	20060101

G01N-0029/24	A	I	L	R	20060101
G01N-0029/26	A	I	L	R	20051008
G01S-0015/89	A	I		R	20060101
G10K-0011/02	A	I		R	20060101
H04R-0017/00	A	I	F	R	20060101
A61B-0008/00	C	I	L	R	20060101
B06B-0001/06	C	I		R	20060101
G01N-0029/04	C	I	L	R	20060101
G01N-0029/24	C	I	L	R	20060101
G01N-0029/26	C	I	L	R	20060101

G01S-0015/00	C	I		R	20060101
G10K-0011/00	C	I		R	20060101
H04R-0017/00	C	I	F	R	20060101

US Classification, Issued: 367105, 73626, 128662.03, 310336

File Segment: EngPI; EPI;
DWPI Class: S05; V06; P31
Manual Codes (EPI/S-X): S05-D03; V06-E02; V06-G02

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t s9/7/2,5
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9/7/2 (Item 2 from file: 65)
Inside Conferences

0006353430 Inside Conference Item ID: CN065650433
Experimental Study on Intermediate Layer Made of (0-3) Composite Materials for Use in Air-Coupled Ultrasonic Transducers
Saito, K.; Nishihira, M.; Imano, K.
Conference: Symposium on ultrasonic electronics - 27th
JAPANESE JOURNAL OF APPLIED PHYSICS PART 1 REGULAR PAPERS SHORT NOTES AND REVIEW , 2007; VOL 46; NO 7B P: 4479-4482
Japan Society of Applied Physics, 2007
ISSN: 0021-4922
Language: English Document Type: Conference Selected papers
Editor: Saito, Shigemi
Location: Nagoya, Japan
2006; Nov (200611) (200611)
Note:
Also known as USE2006.

BIBLIOGRAPHIC

[File 98] General Sci Abs 1984-2008/Mar


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Set     Items   Description
S1         44   S RN=26171-83-5
S2       1084   S RN=584-03-2
S3      32037   S BUTANEDIOL? OR (BUTYLENE OR ETHYLETHYLENE)(6N)GLYCOL?
OR BUTANDIOL? OR DIHYDROXYBUTAN? OR DI(2N)(HYRDOXYBUTAN? OR
HYDROXY(2N)BUTAN?)
S4    1475722   S ULTRASO? OR ULTRA()(SOUND? OR SONIC? OR SONOGRA?) OR
(HI OR HIGH)()FREQUENC?(3N)(SOUND?) OR SONOGRA? OR HIFU OR
ELASTIC()WAVE? OR ACCOUSTIC?
S5      32928   S S1:S3
S6        111   S S5(30N)S4
S7         64   RD  (unique items)
S8    6486722   S ATTENUAT? OR WEAK? OR DEBILIT? OR DECLINE OR
DEGENERATE OR DETERIORATE OR RELAX? OR WASTE? OR LOOS? OR SLACK?
S9        418   S S8(30N)S5
S10       418   S S9(10N)S5
S11   6976194   S PROBE? OR APPARATUS? OR INSTRUMENT? OR DEVICE?
S12       189   S S8(7N)S5
S13       175   S S12 NOT S6
S14       111   RD  (unique items)
S15  14478605   S MEDIUM? OR GEL? ?OR HYRDROGEL? OR HYRDROCREAM? OR
CREAM? ? OR LIQUID? OR FLUID? OR SOLUT? OR ORGANIC()POLYMER? OR RESIN?
OR GELAT?
S16      2436   S S15(15N)S5
S17         3   S S16(15N)S11
S18      3171   S S15(30N)S5
S19        13   S S18(30N)S11
S20        10   S S19 NOT S17
S21         5   RD  (UNIQUE ITEMS)
```

7/3,K/63 (Item 4 from file: 440)
Current Contents Search(R)

09676713
ISSN: 0008-4042

JOURNAL:CANADIAN JOURNAL OF CHEMISTRY-REVUE
CANADIENNE DE CHIMIE
|
, 1998 (TABLE OF CONTENTS RECORD)
(The Complete Table of Contents now Available in Format 19)

...P. 464-468. Ultrasonic velocity and volumetric properties of isomeric butanediols plus water systems. Hawrylak B; Gracie K; Palepu R. ST FRANCIS XAVIER UNIV,DEPT CHEM...

7/3,K/1 (Item 1 from file: 73)
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0080191950 EMBASE No: 2004371466
Positron annihilation in and compressibility of n-butanol in ethylene glycol, 1,2-butanediol and 1,4-butanediol: Do hydrophobic-like phenomena occur in non-aqueous, highly-associated solvents?

Jerie K. // Baranowski A. // Glinski J. // Przybylski J.
Institute of Experimental Physics, Univ. of Wroclaw Wroclaw, Poland // Wroclaw Inst. of Exp. Physics, Univ. Wroclaw Inst. Exp. Phys. W., Poland // Wroclaw Faculty of Chemistry, Univ. Wroclaw Fac. of Chem. Wroclaw, Poland // Faculty of Chemistry, Univ. of Wroclaw Wroclaw, Poland
Author email: glin@wchuwr.chem.uni.wroc.pl
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Corresp. Author email: glin@wchuwr.chem.uni.wroc.pl

Journal of Radioanalytical and Nuclear Chemistry (J. Radioanal. Nucl. Chem.) (Netherlands) September 14, 2004 , 261/3 (645-649)
CODEN: JRNCD ISSN: 02365731
Item Identifier (DOI): 10.1023/B:JRNC.0000037108.96600.95
Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 17

...are forming in ethylene glycol. However, no such evidences were found for the systems where butanediols are the solvents. Ultrasonic investigations do not confirm formation of any specific structures. This is caused, most possibly, by...

7/3,K/2 (Item 2 from file: 73)
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0079614079 EMBASE No: 2003321948
Hydrophobic-like solvation in non-aqueous solutions: Positron annihilation in and compressibility of n-hexanol in ethylene glycol, 1,2-butanediol and 1,4-butanediol

Jerie K.; Baranowski A.; Glinski J.; Przybylski J.
Affiliation unspecified.
Author email: glin@wchuwr.chem.uni.wroc.pl
Corresp. Author email: glin@wchuwr.chem.uni.wroc.pl

Journal of Radioanalytical and Nuclear Chemistry (J. Radioanal. Nucl. Chem.) (Hungary) August 1, 2003 , 257/2 (367-370)

CODEN: JRNCD ISSN: 02365731
Item Identifier (DOI): 10.1023/A:1024796115919
Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 14

...is a hydrophobic-like solvation. No evidences for it were found for the systems containing butanediols as solvents. Unfortunately, ultrasonic investigations do not confirm the formation of any specific structures, most possibly because the compressibilities...

7/3,K/3 (Item 3 from file: 73)
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0077802103 EMBASE No: 1999288430
Investigation of the structure of aqueous solutions of 1,2- and 1,4- butanediol by positron annihilation and ultrasonic methods

Jerie K.; Baranowski A.; Glinski J.; Orzechowski K.
Institute of Experimental Physics, Wroclaw University, Wroclaw, Poland
Corresp. Author: Jerie K.
Corresp. Author Affil: Institute of Experimental Physics, Wroclaw University, Wroclaw, Poland
Corresp. Author email: glin@wchuwr.chem.uni.wroc.pl

Journal of Radioanalytical and Nuclear Chemistry (J. Radioanal. Nucl. Chem.) (Hungary)
August 30, 1999 , 241/2 (265-270)
CODEN: JRNCD ISSN: 02365731
Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 18
Investigation of the structure of aqueous solutions of 1,2- and 1,4- butanediol by positron annihilation and ultrasonic methods

7/3,K/5 (Item 2 from file: 144)
Pascal

17899406 PASCAL No.: 06-0500088

A comparative study of thermophysical and spectroscopic properties in
mixtures of isomeric butanediol and N,N-dimethylformamide

MEHTA S K; RAM Ganga; MANI Chander; BHASIN K K
Department of Chemistry and Centre of Advanced Studies in Chemistry,
Panjab University, Sector 14, Chandigarh UT 160 014, India
Journal: Journal of chemical thermodynamics,
2006, 38 (7)
836-848
Language: English

The thermodynamic parameters viz. excess molar volume V SUP E and
ultrasonic
speed u, transport parameter viscosity eta , and
spectroscopic parameters viz. IR, SUP 1 H, SUP 1 SUP 3 C NMR have been
measured for the mixtures of isomeric butanediol (1,2-, 1,3-, 1,4-
and 2,3-butanediol) and N,N-dimethylformamide over...

7/3,K/7 (Item 4 from file: 144)
Pascal

17392558 PASCAL No.: 05-0471532

Effect of placement of hydroxyl groups in isomeric butanediol on the
behaviour of thermophysical and spectroscopic properties of
pyrrolidin-2-one

MEHTA S K; RAM Ganga; BHASIN K K
Department of Chemistry and Centre of Advanced Studies in Chemistry,
Punjab University, Sector 14, Chandigath, U.T. 160 014, India
Journal: Journal of chemical thermodynamics,
2005, 37 (8)
791-801
Language: English

The thermophysical parameters, viz. excess molar volume V SUP E ,

ultrasonic speed u, viscosity eta and spectroscopic parameters, viz.
IR and 'H NMR have been measured for the mixtures of pyrrolidin-2-one and
isomeric butanediol (1,2-, 1,3-, 1,4- and 2,3-BTD) over the whole
composition range...

English Descriptors: Position isomer; Butanediols; Pyrrolidine derivatives; Diol; Thermophysical properties; Molar volume; Excess
parameter; Thermodynamic properties; Ultrasonic velocity; Infrared
spectrometry; NMR spectrometry; Isentropic compression; Organic solvent

French Descriptors: Isomere position; Butanediol; Pyrrolidine derive
; Diol; Propriete thermophysique; Volume molaire; Grandeur exces;
Propriete thermodynamique; Vitesse ultrason; Spectrometrie IR;
Spectrometrie RMN; Compression isentropique; Solvant organique;
Pyrrolidin-2-one-SOL

^7/3,K/12 (Item 9 from file: 144)
Pascal

13528755 PASCAL No.: 98-0228760

Thermodynamic properties of binary mixtures of butanediols with water

HAWRYLAK B; GRACIE K; PALEPU R
Department of Chemistry, St. Francis Xavier University, Antigonish, Nova
Scotia B2G 2W5, Canada
Journal: Journal of solution chemistry, 1998, 27 (1)
17-31
Language: English

Ultrasonic velocities and densities at five different temperatures

over the entire composition range for aqueous solutions of 1,2, 1,3, 1,4,
and 2,3 butanediols were measured. Excess volumes and adiabatic
compressibilities were calculated using the experimental data. Apparent and
...

7/3,K/16 (Item 13 from file: 144)
Pascal

07167015 PASCAL No.: 86-0215249

Dynamic study of the interaction between diols and water by ultrasonic
methods. III: 2-Methylpentane-2,4-diol solution

NISHIKAWA S; NAKAO N
Saga univ., fac. sci. eng., dep. chemistry, Saga 840, Japan
Journal: CS Faraday transactions 1, 1985, 81 (8) 1931-1938

Language: ENGLISH

French Descriptors: Solution aqueuse; Diol; Effet milieu; Teneur; Cinetique
; Absorption ultrason; Parametre thermodynamique; Relaxation; Toluene; Sonochimie; Eau; Butanediol-1,2; Hexanediol-1,6; Pentanediol-2,4(methyl-2)

^7/3,K/18 (Item 15 from file: 144)
Pascal

03737585 PASCAL No.: 82-0258151

ULTRASONIC RELAXATION IN AQUEOUS SOLUTIONS OF BUTANEDIOLS

NISHIKAWA S; MASHIMA M
SAGA UNIV., FAC. SCI. ENG., DEP. CHEM./SAGA 840,JAPAN
Journal: CS FARADAY TRANS. 1, 1982

, 78 (4) 1249-1255

Language: ENGLISH

ULTRASONIC RELAXATION IN AQUEOUS SOLUTIONS OF BUTANEDIOLS

French Descriptors: SOLUTION AQUEUSE; STRUCTURE; ABSORPTION ULTRASON
; RELAXATION ULTRASONORE; BUTANEDIOL

7/3,K/21 (Item 18 from file: 144)
Pascal

03325956 PASCAL No.: 81-0365405

ULTRASONIC PROPERTIES OF SOME DIAMINE CURED ALIPHATIC EPOXY POLYMERS

HARTMANN B
NAVAL SURFACE WEAPONS CENT./SILVER SPRING MD 20910,USA
Journal: POLYMER, 1981
, 22 (6) 736-739
Language: ENGLISH

French Descriptors: POLYMERE ALIPHATIQUE; EPOXYDE RESINE; DURCISSANT;
ABSORPTION ONDE; ULTRASON; TRANSITION VITREUSE; TEMPS RELAXATION;
INFLUENCE; TEMPERATURE; DIAMINE-ACT; BUTANEDIOL-ENT; GLYCIDYLE ETHER-ENT

^7/3,K/22 (Item 1 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options
CA SEARCH(R)

147039807 CA: 147(2)39807x JOURNAL

Study of the Acoustic and Thermodynamic Properties of 1,2- and 1,3-Butanediol by Means of High-Pressure Speed of Sound Measurements at Temperatures from (293 to 318) K and Pressures up to 101 MPa
Author: Zorebski, Edward; Dzida, Marzena
Location: Institute of Chemistry, University of Silesia, 40006, Katowice, Pol.
Journal: J. Chem. Eng. Data
Date: 2007
Volume: 52 Number: 3 Pages: 1010-1017
CODEN: JCEAAX
ISSN: 0021-9568
Publisher Item Identifier: 0021-9568(60)00577-3
Language: English
Publisher: American Chemical Society

7/3,K/28 (Item 7 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options
CA SEARCH(R)

137310658 CA: 137(21)310658n JOURNAL
Pinacol coupling of aromatic aldehydes and ketones using Zn-ZnCl2 under ultrasound
Author: Zang, Hong-Jun; Li, Ji-Tai; Ning, Ning; Wei, Na; Li, Tong-Shuang
Location: Department of Chemistry, Hebei University, Baoding, Peop. Rep. China, 071002
Journal: Indian J. Chem., Sect. B: Org. Chem. Incl. Med. Chem.
Date: 2002
Volume: 41B Number: 5 Pages: 1078-1080
CODEN: IJSBDB
ISSN: 0376-4699
Language: English
Publisher: National Institute of Science Communication

7/3,K/29 (Item 8 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options
CA SEARCH(R)

136345734 CA: 136(22)345734r JOURNAL
In vitro effects of low-intensity ultrasound stimulation on the bone cells
Author: Sun, Jui-Sheng; Hong, Rue-Chain; Chang, Walter Hong-Shong; Chen, Li-Ting; Lin, Feng-Huei; Liu, Hwa-Chang
Location: Department of Orthopaedic Surgery, National Taiwan University Hospital, Taipei, Taiwan,
Journal: J. Biomed. Mater. Res.

Date: 2001
Volume: 57 Number: 3 Pages: 449-456
CODEN: JBMRBG
ISSN: 0021-9304
Language: English
Publisher: John Wiley & Sons, Inc.

7/3,K/31 (Item 10 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options

135061047 CA: 135(5)61047y JOURNAL
Structure of aqueous solutions of 1,2-, 1,3- and 1,4-butanediol investigated by positron annihilation and ultrasonic methods
Author: Jerie, K.; Baranowski, A.; Glinski, J.; Orzechowski, K.; Przybylski, J.
Location: Institute of Experimental Physics, Wroclaw University, 50-205, Wroclaw, Pol.
Journal: Acta Phys. Pol., A
Date: 2001
Volume: 99 Number: 3-4 Pages: 393-398
CODEN: ATPLB6
ISSN: 0587-4246
Language: English
Publisher: Polish Academy of Sciences, Institute of Physics

^7/3,K/34 (Item 13 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options

129236217 CA: 129(18)236217j JOURNAL
Ultrasonic velocity and volumetric properties of isomeric butanediols plus water systems
Author: Hawrylak, Brent; Gracie, Kim; Palepu, R.
Location: Dept. of Chemistry, Memorial Univ., St. Johns, NF, Can., A1B 3X7
Journal: Can. J. Chem.
Date: 1998
Volume: 76 Number: 4 Pages: 464-468
CODEN: CJCHAG
ISSN: 0008-4042
Language: English
Publisher: National Research Council of Canada

7/3,K/37 (Item 16 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options
CA SEARCH(R)

116084904 CA: 116(10)84904x JOURNAL
Dynamic light scattering and ultrasonic investigations during the cure reaction of an epoxy resin
Author: Alig, Ingo; Lellinger, Dirk; Nancke, Katja; Rizos, Apostolos; Fytas, George
Location: Dep. Phys., Tech. Hochsch. Merseburg, Merseburg, Germany, O-4200
Journal: J. Appl. Polym. Sci.
Date: 1992
Volume: 44 Number: 5 Pages: 829-35
CODEN: JAPNAB
ISSN: 0021-8995
Language: English

7/3,K/45 (Item 24 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options
CA SEARCH(R)

101060485 CA: 101(8)60485a JOURNAL
Acoustic spectroscopy of some highly viscous liquids
Author: Khemraev, B.
Location: Fiz.-Tekh. Inst., Ashkhabad, USSR
Journal: Akust. Zh.
Date: 1984
Volume: 30 Number: 3 Pages: 380-5
CODEN: AKZHAE
ISSN: 0002-3914
Language: Russian

^14/7,K/1 (Item 1 from file: 73)
Fulltext available through: STIC Full Text Retrieval Options
EMBASE

0081158523 EMBASE No: 2006220687
Determination of the nonlinear parameter by propagating and modeling finite amplitude plane waves

Chavrier F.; Lafon C.; Birer A.; Cathignol D. // Chavrier F.; Lafon C.; Birer A.; Cathignol D. // Barriere C.; Jacob X.
Inserm, U556, Lyon, F-69003, France // Universite Claude Bernard Lyon 1, Lyon, F-69000, France // Laboratoire Ondes et Acoustique, Universite Paris 7-CNRS-ESPCI, Paris, F-75231

Cedex 05, France
Corresp. Author: Chavrier F.
Corresp. Author Affil: Inserm, U556, Lyon, F-69003, France

Journal of the Acoustical Society of America (J. Acoust. Soc. Am.) (United States) June 2, 2006 , 119/5 (2639-2644)
CODEN: JASMA ISSN: 00014966
Item Identifier (DOI): 10.1121/1.2190161
Document Type: Journal ; Article Record Type: Abstract
Language: English Summary language: English
Number of References: 25

The acoustic nonlinear parameter, B/A, is an important piece of data whenever high intensity pressure fields are under consideration. In this work, an alternative method is proposed to measure this parameter. First, the method involves measuring the sound velocity and nonlinear waveform distortion of a finite amplitude plane wave propagating through a medium, Butanediol, whose density and attenuation law have been preliminarily determined. Measurements were performed in the nearfield of a piston where plane wave propagation regime exists. Impulse response of the hydrophone was determined and pressure waveforms were obtained by a convolution process. Then, the method involves modeling, in time domain and under experimental conditions, the theoretical nonlinear waveform distortion and fitting it to the experimental results by adjusting the B/A parameter. Comparative measurements were performed using the technique of parametric interaction. The respective results for the two methods (B/A=11.0+/-10% and 10.9+/-5%) are in a good agreement despite a smaller degree of accuracy for the proposed method. (c) 2006 Acoustical Society of America.

...velocity and nonlinear waveform distortion of a finite amplitude plane wave propagating through a medium, Butanediol, whose density and attenuation law have been preliminarily determined. Measurements were performed in the nearfield of a piston where...

14/7,K/20 (Item 8 from file: 144)
Fulltext available through: STIC Full Text Retrieval Options
Pascal

14231478 PASCAL No.: 99-0433041

Blends of thermoplastic polyurethanes and polyamide 12 : Structure,
molecular interactions, relaxation, and mechanical properties

PESETSKII S S; FEDOROV V D; JURKOWSKI B; POLOSMAK N D

V. A. Belyi Metal-Polymer Research Institute of National

Academy of
Sciences of Belarus, 32a Kirov Street, 246652 Gomel, Belarus;
Division of
Plastic and Rubber Processing, Institute of Materials Technology,
Poznan
University of Technology, 60-965 Poznan, Poland
Journal: Journal of applied polymer science,
1999, 74 (5)
1054-1070
ISSN: 0021-8995 CODEN: JAPNAB Availability: INIST-1257;
354000089866490030
No. of Refs.: 35 ref.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: United States
Language: English
Studies were done to understand the effects of polyamide
12 (PA 12)
incorporation on microphase separation (microsegregation) in
thermoplastic
polyurethanes (TPU) based
on oligoether (polytetramethylene oxide,
molecular
weight, 1000) and oligoester (polyethylene butylene
glycol adipate, molecular weight, 2000), and relaxation
transitions, compatibility, and molecular interaction energy
in polymer
blends. It was learned that the addition of PA 12 cause
d partial
degradation of the domain structure in the oligoester-
containing
polyurethane, whereas interaction of hard blocks
in the
oligoether-containing polyurethane increased. Analyzing
compatibility and
interphase interactions in blends is possible in the frame of
the quantum
theory of relaxation processes. Also, interferences of the
components on
characteristic temperatures of relaxation transitions were
studied. Partial
compatibility was detected
between PA 12 and the soft block of
oligoether-based TPU over the whole range of components
concentrations
tested. For oligoester-based TPU, partial compatibility was
observed only
at low polyamide concentrations (up to 20 wt %). Effects of a
polyurethane
phase on PA 12 crystallization in the blends along with the
pattern of
concentration-mechanical properties dependencies are discussed.

... in thermoplastic polyurethanes (TPU) based on oligoether
(polytetramethylene oxide, molecular weight, 1000) and oligoester
(polyethylene butylene glycol adipate, molecular weight, 2000), and relaxation transitions, compatibility, and molecular
interaction energy in polymer blends. It was learned that the addition...

14/7,K/78 (Item 47 from file: 399)
Fulltext available through: STIC Full Text Retrieval Options

101238817 CA: 101(26)238817a JOURNAL
The dielectric spectra of some linear 1,2-diols
Author: El-Samahy, Ahmed; Gestblom, Bo
Location: Inst. Phys., Uppsala Univ., Uppsala, Swed.
Journal: Finn. Chem. Lett.
Date: 1984
Number: 3 Pages: 54-8
CODEN: FCMLAS
ISSN: 0303-4100
Language: English
Section:
CA176009 Electric Phenomena
Identifiers: dielec property diol, relaxation dielec diol
Descriptors:
Dielectric constant and dispersion... Dielectric loss... Dielectric relaxation ...
of diols
CAS Registry Numbers:
584-03-2 dielec. relaxation of
57-55-6 107-21-1 properties, dielec. relaxation of

17/7,K/1 (Item 1 from file: 399)

138278553 CA: 138(18)278553g PATENT
Resin-coated particles and device for displaying image using Coulomb force

Inventor (Author): Yakushiji, Gaku; Kitano, Hajime; Murata, Kazuya; Nihei, Norio; Takagi, Koji ; Masuda, Yoshitomo; Kawagoe, Takahiro
Location: Japan,
Assignee: Bridgestone Corporation
Patent: PCT International ; WO 200327764 A1 Date: 20030403
Application: WO 2002JP9620 (20020919) *JP 2001284843 (20010919) *JP 2001284845 (20010919) *JP 2001289422 (20010921) *JP 2001289423 (20010921) *JP 2001313420 (20011011) *JP 2001313421 (20011011) *JP 2001313422 (20011011) *JP 2001313423 (20011011) *JP 2001320967 (20011018) *JP 2001320968 (20011018) *JP 2001320966 (20011018) *JP 2001373290 (20011206) *JP 2001396743 (20011227) *JP 2001396745 (20011227) *JP 2001396746 (20011227) *JP 2001396747 (20011227) *JP 2001396748 (20011227) *JP 2001396744 (20011227)
Pages: 111 pp.
CODEN: PIXXD2
Language: Japanese
Patent Classifications:
Class: G02F-001/17A
Designated Countries: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM
Designated Regional: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG
Section:
CA274013 Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes
CA238XXX Plastics Fabrication and Uses
Identifiers: resin coated particle image display Coulomb force
Descriptors:
Polyurethanes,uses ...
acrylates; resin-coated particles and device for displaying image using Coulomb force
Epoxy resins,uses ...
AER 6071; resin-coated particles and device for displaying image using Coulomb force
Polyester rubber... Synthetic rubber,uses ...
butanediol-polytetramethylene glycol-terephthalic acid, block; resin-coated particles and device for displaying image using Coulomb force
Electrographic toners... Polyester rubber... Polyamides,uses... Optical imaging devices...
Electrophotographic toners ...
resin-coated particles and device for displaying image using Coulomb force

CAS Registry Numbers:
297765-57-2 73020-54-9 100783-78-6 9011-17-0 8005-02-5 152165-59-8 resin-coated particles and device for displaying image using Coulomb force
13463-67-7 uses, resin-coated particles and device for displaying image using Coulomb force

FULLTEXT

show files

[File 9] Business & Industry(R) Jul/1994-2008/Mar 10

[File 16] Gale Group PROMT(R) 1990-2008/Mar 07

File 16: Because of updating irregularities, the banner and the update (UD=) may vary.

[File 160] Gale Group PROMT(R) 1972-1989

[File 148] Gale Group Trade & Industry DB 1976-2008/Feb 26

File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.

[File 621] Gale Group New Prod.Annou.(R) 1985-2008/Feb 25

[File 441] ESPICOM Pharm&Med DEVICE NEWS 2008/Jun W4

[File 149] TGG Health&Wellness DB(SM) 1976-2008/Feb W3

[File 15] ABI/Inform(R) 1971-2008/Mar 12

[File 624] McGraw-Hill Publications 1985-2008/Mar 13

File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more

[File 635] Business Dateline(R) 1985-2008/Mar 13

[File 636] Gale Group Newsletter DB(TM) 1987-2008/Mar 10

[File 135] NewsRx Weekly Reports 1995-2008/Mar W1

[File 129] PHIND(Archival) 1980-2008/Mar W1

[File 429] Adis Newsletters(Archive) 1982-2008/Mar 12

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; d s
Set      Items   Description
S1        6453   S BUTANEDIOL? OR (BUTYLENE OR ETHYLETHYLENE)(6N)GLYCOL?
OR BUTANDIOL? OR DIHYDROXYBUTAN? OR DI(2N)(HYRDOXYBUTAN? OR
HYDROXY(2N)BUTAN?)
S2      223850   S ULTRASO? OR ULTRA()(SOUND? OR SONIC? OR SONOGRA?) OR
(HI OR HIGH)()FREQUENC?(3N)(SOUND?) OR SONOGRA? OR HIFU OR
ELASTIC()WAVE? OR ACCOUSTIC? OR AMPLITUD?
S3           8   S S1(30N)S2
S4           8   RD  (unique items)
S5      508959   S ATTENUAT? OR RELAX?
S6          22   S S1(30N)S5
S7          19   RD  (unique items)
S8          18   S S7 NOT S4
S9    10289758   S MEDIUM? OR GEL? ?OR HYRDROGEL? OR HYRDROCREAM? OR
CREAM? ? OR LIQUID? OR FLUID? OR SOLUT? OR ORGANIC()POLYMER? OR RESIN?
OR GELAT?
S10   11710304   S PROBE? OR DEVICE? ? OR TOOL? ? OR INSTRUMENT? OR
IMPLEMENT? OR APPARATUS?
S11         827   S S1(30N)S9
S12           3   S S11(30N)S10
S13   12018740   S DIAGNOS? OR MEDIC? OR HOSPITAL? ? OR HEALTH OR
CLINIC? OR DENTAL? OR DENTIST? OR TREATMENT? OR DOCTOR? OR THERAP?
S14     884174   S S9(30N)S13
S15         38   S S14(30N)S1
S16         37   S S15 NOT (S6 OR S4 OR S12)
S17         31   RD  (unique items)
S18   20786849   S OPTIC? OR IMAGE? ? OR IMAGING OR VIEW? OR SEE OR SEES
OR DISPLAY? OR SHOW? OR PICTUR? OR PICTOR? OR GRAPHIC?
S19        348   S S1(30N)S18
S20         67   S S19(30N)S9
S21         59   S S20 NOT (S15 OR S6 OR S4 OR S12)
S22         47   RD  (unique items)
S23         47   S S1(30N)S10
S24    2200419   S S20 OR S15 OR S6 OR 34 OR S12
S25         43   S S23 NOT S24
S26         29   RD  (unique items)
```

4/3,K/8 (Item 4

from file: 31)
World Surface Coatings Abs

00467353 WSCA Abstract Number: 93-04623 WSCA ID Number: 364623
Dynamic light scattering and ultrasonic investigations during the cure reaction of an epoxy resin.

ALIG I; OTHERS
J. Appl. Polym. Sci. 1992, Vol 44 No 5, 829-35.
1992
Journal Announcement: 9306 WSCA Update Code: 9304
Document Type: Journal Language: English
Section (Code,Heading): 71 Other Properties and Testing Methods
Section Code Cross-Reference: 17;

Abstract: ...measurable at an earlier stage in the reaction by the Brillouin scattering method than by ultrasonics. However, the latter showed evidence of secondary relaxations. The system examined was a bisphenol A diglycidyl ether being cured at 100 deg. C using butanediol, in presence of magnesium perchlorate. The relaxation times at different extents of reaction and for...

4/3,K/7 (Item 3 from file: 31)
World Surface Coatings Abs

00471378 WSCA Abstract Number: 93-08925 WSCA ID Number: 368925
Abnormalities in electrical and acoustic properties of thermoplastic polyurethane.

VOLKOVA A V; DOMKIN A N; STRACHOV V V
Polym. Internat. 1993, Vol 30 No 1, 1-3.
1993
Journal Announcement: 9311 WSCA Update Code: 9309
Document Type: Journal Language: English
Section (Code,Heading): 71 Other Properties and Testing Methods
Section Code Cross-Reference: 21;

Abstract: A polyurethane prepared from diphenylmethane diisocyanate and a hydroxyl-terminated polybutylene glycol adipate showed, under certain conditions, specific volume resistivity and ultrasonic pulse velocity that were unusually low for polymeric materials. These abnormalities were attributed to the

8/3,K/12 (Item 1 from file: 31)
World Surface Coatings Abs

00583145 WSCA Abstract Number: 05-06724 WSCA ID Number: 606724
Volume and temperature dependences of the global and segmental dynamics in polymers: functional forms and implications for the glass transition.

NGAI K L; CASALINI R; ROLAND C M
Macromol. 2005, Vol 38 No 10, 4363-70.
2005
Journal Announcement: 0510 WSCA Update Code: 200510
Document Type: Journal Language: English
Section (Code,Heading): 71 Other Properties and Testing Methods
Section Code Cross-Reference: 11; 15; 17;

Abstract: ...viscoelasticity), described previously, is shown to account for the stronger dependences of the segmental alpha-relaxation time, as compared with those of the longest normal mode relaxation time, upon volume and temperature, for polyisoprene, polypropylene glycol and another aliphatic polyether, termed polyoxybutylene. This model also shows how both relaxation times are able to be a function of the product of the specific volume, raised...

8/3,K/15 (Item 4 from file: 31)
World Surface Coatings Abs

00509739 WSCA Abstract Number: 97-07772 WSCA ID Number: 447772
Urethane acrylate compositions cured by ultraviolet radiation as intermediate protective covers of optical fibres.

PODKOSCIELNY W; TARASIUK B; RAYSS J; PODKOSCIELNY W M
Angew. Makromol. Chem. 1996, Vol 242, 123-38.
1996
Journal Announcement: 9710 WSCA Update Code: 9710
Document Type: Journal Language: English
Section (Code,Heading): 79 Radiation Curing
Section Code Cross-Reference: 17; 21; 63;

Abstract: ...mechanical properties, heat resistance and water vapour diffusion coefficient. Compositions were obtained which formed non-attenuating coatings on telecommunication optical fibres in a single layer. The starting materials were toluene diisocyanate, isophorone diisocyanate, oligoether diols and triols based on ethylene glycol or propylene glycol, hydroxyethyl methacrylate, hydroxypropyl methacrylate, butanediol diacrylate, etc. 22 refs.

8/3,K/16 (Item 5 from file: 31)
World Surface Coatings Abs

00507879 WSCA Abstract Number: 97-05912 WSCA ID Number: 445912
Solid-state carbon-13 nuclear magnetic resonance analyses of the microphase-separated structure of polyurethane elastomer.

ISHIDA M; YOSHINAGA K; HORII F
Macromol. 1996, Vol 29 No 27, 8824-9.
1996
Journal Announcement: 9708 WSCA Update Code: 9708
Document Type: Journal Language: English
Section (Code,Heading): 69 Analytical Methods
Section Code Cross-Reference: 21;

Abstract: Carbon-13 spin-lattice relaxation times were determined for the polyurethanes, the polyurethanes being obtained as phase-separated materials by reaction of p-phenylene diisocyanate with polytetramethylene oxide and butanediol. The diisocyanate and butanediol residues gave rise to three relaxation times, whilst the polyether chains exhibited two values. The shorter of the two and the.

8/3,K/17 (Item 6 from file: 31)
World Surface Coatings Abs

00445869 WSCA Abstract Number: 91-03385 WSCA ID Number: 323385
Study of toluene diisocyanate-based polyurethanes of various isomer ratios.

NIERZWICKI W; WALCZYNSKI B
J. Appl. Polym. Sci. 1990, Vol 41 Nos 5/6, 907-15.
1990
Journal Announcement: 9105 WSCA Update Code: 9103
Document Type: Journal Language: English
Section (Code,Heading): 21 Nitrogenous Polymers
Section Code Cross-Reference: 71;

Abstract: ...was prepared from various mixtures of the 2,4- and 2,6-diisocyanates, together with butanediol and polytetramethylene glycol. Their glass transition and flow temperatures, relaxation behaviour and some mechanical properties were measured and are discussed with references to changes in...

PATENTS

b 350,347

[File 350] Derwent WPIX 1963-2008/UD=200815

```
d s
Set     Items   Description
S1      22902   S BUTANEDIOL? OR (BUTYLENE OR ETHYLETHYLENE)(6N)GLYCOL?
OR BUTANDIOL? OR DIHYDROXYBUTAN? OR DI(2N)(HYRDOXYBUTAN? OR
HYDROXY(2N)BUTAN?)
S2     406918   S ULTRASO? OR ULTRA()(SOUND? OR SONIC? OR SONOGRA?) OR
(HI OR HIGH)()FREQUENC?(3N)(SOUND?) OR SONOGRA? OR HIFU OR
ELASTIC()WAVE? OR ACCOUSTIC? OR AMPLITUD?
S3         21   S S1(30N)S2
S4     161842   S ATTENUAT? OR RELAX?
S5         21   IDPAT S3 (sorted in duplicate/non-duplicate order)
S6         21   IDPAT S3 (primary/non-duplicate records only)
S7         12   S S1(30N)S4
S8         12   S S7 NOT S3
S9         12   IDPAT (sorted in duplicate/non-duplicate order)
S10        11   IDPAT (primary/non-duplicate records only)
S11    333361   S IC=A61B
S12        77   S S1 AND S11
S13        74   S S12 NOT (S7 OR S3)
S14        74   IDPAT (sorted in duplicate/non-duplicate order)
S15        73   IDPAT (primary/non-duplicate records only)


^6/25/1     (Item 1 from file: 350)


0015492554  - Drawing available

WPI ACC NO: 2006-056680/200606

XRPX Acc No: N2006-048906

Ultrasonic probe used for ultrasonic diagnosing device, has ultrasonic
transceiver accommodated in packing case which is filled with acoustic
medium

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD  (MATU)

Inventor: SAITO K

6 patents,  109 countries

Patent Family (6 patents,  109 countries)

  Patent
  Number           Kind   Date    Update

  WO 2005120356     A1  20051222  200606  B

  KR 2006063787     A   20060612  200674  E

  EP 1767153        A1  20070328  200725  E

  US 20070112271    A1  20070517  200734  E
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CN 1964669 A 20070516 200763 E

KR 657883 B1 20061214 200765 E

Local Applications (No Type Date): WO 2005JP9121 A 20050519; WO 2005JP9121 A 20050519; KR 2005722292 A 20051122; EP 2005741527 A 20050519; WO 2005JP9121 A 20050519; WO 2005JP9121 A 20050519; US 2005559881 A 20051207; CN 200580018894 A 20050519; WO 2005JP9121 A 20050519; KR 2005722292 A 20051122

Priority Applications (no., kind, date): JP 2004172231 A 20040610

Alerting Abstract WO A1

NOVELTY - The ultrasonic probe has an ultrasonic transceiver (101) accommodated in a packing case (105) which is filled with an acoustic medium (106) such as 1,2-butylene glycol, at temperature condition of 10-40 (deg)C.

USE - Ultrasonic probe used for ultrasonic diagnosing device.

ADVANTAGE - Since acoustic medium of acoustic impedance nearer to that of human ear, and ultrasonic attenuation is less, transmission and reception of high sensitive ultrasonic wave is performed reliably. Since the acoustic medium of low viscosity is used smooth and high speed drive of ultrasonic transceiver, is achieved.

DESCRIPTION OF DRAWINGS - The figure shows a sectional view of the ultrasonic probe.

101 ultrasonic transceiver

102 drive shaft

103 joining frame

104 window

105 packing case

106 acoustic medium

10/25/4 (Item 4 from file: 350)

0014035020

WPI ACC NO: 2004-217172/200421

XRAM Acc No: C2004-086008

Aliphatic polyester-type resin for foam manufacture, has preset recoverability distortion and longest relaxation time at preset condition

Patent Assignee: MITSUBISHI CHEM CORP (MITU)

Inventor: HIRASHIMA A; ISHIKAWA T; UEDA T

1 patents, 1 countries

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update
JP 2003268143	A	20030925	200421 B

Local Applications (No Type Date): JP 200271463 A 20020315

Priority Applications (no., kind, date): JP 200271463 A 20020315

Alerting Abstract JP A

NOVELTY - The aliphatic polyester-type resin has recoverability distortion ((gamma)R), calculated by preset relation, of 1-10, at 190(deg)C and rate of shear of 5 second-1, and longest relaxation time ((tau)d) of 10-100 seconds at the same temperature.

DESCRIPTION - The aliphatic polyester-type resin has recoverability distortion ((gamma)R) of 1-10, calculated as: (gamma)R = N1/2((similar)s), at 190(deg)C and rate of shear of 5 second-1, and longest relaxation time ((tau)d) of 10-100 seconds at the same temperature. An INDEPENDENT CLAIM is included for the aliphatic polyester-type resin foam.

USE - For manufacture of foam (claimed) used for buffer, heat insulating material, sound insulating material and various structural components.

ADVANTAGE - The aliphatic polyester-type resin has excellent foaming property and provides foaming molding with uniform fine foam structure.

15/25/23 (Item 23 from file: 350)

0013572476

WPI ACC NO: 2003-666966/200363

XRAM Acc No: C2003-182018

XRPX Acc No: N2003-532242

Gel composition for ultrasonic medium to transmit ultrasonic waves to living body contains carboxyvinyl polymer and/or its salt and antioxidant(s)

Patent Assignee: POLA CHEM IND INC (POKK)

Inventor: ISHIGAMI M; JINBO K

1 patents, 1 countries

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update
JP 2003153896	A	20030527	200363 B

Local Applications (No Type Date): JP 2001354474 A 20011120

Priority Applications (no., kind, date): JP 2001354474 A 20011120

Alerting Abstract JP A

NOVELTY - Gel composition contains a carboxyvinyl polymer and/or its salt and antioxidant(s).

USE - For ultrasonic medium (claimed) to transmit ultrasonic waves to living body.

ADVANTAGE - The gel composition, which is applied externally reduces loss

of ultrasonic energy transmission, suppresses inflammation or skin irritation due to irradiation of ultrasonic waves.

15/25/40 (Item 40 from file: 350)

0009778285

WPI ACC NO: 2000-066533/200006

XRAM Acc No: C2000-019105

XRPX Acc No: N2000-052162

Gel composition for ultrasonic diagnosis - containing a salt of carboxyvinyl polymer and xanthan gum

Patent Assignee: KAYAKU KK (KAYA); POLA CHEM IND INC (POKK)

Inventor: SOTOOKA N; TAKATORI M

1 patents, 1 countries

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update
JP 11318898	A	19991124	200006 B

Local Applications (No Type Date): JP 1998150703 A 19980514

Priority Applications (no., kind, date): JP 1998150703 A 19980514

Alerting Abstract JP A

NOVELTY - A gel composition for ultrasonic diagnosis contains a salt of a carboxyvinyl polymer and xanthan gum.

DETAILED DESCRIPTION - A gel composition for ultrasonic diagnosis contains one or more of salts of carboxyvinyl polymers and xanthan gum. Preferably, the salt is the sodium salt. Preferably, the composition contains 15-25 wt.% of a polyhydric alcohol. Preferably, subjects to be diagnosed are the aged. The composition has a hardness of 2 0-40, measured with a soft card meter at 20(deg)C under the 100 g load.

USE - The composition is suitable for the non-invasive ultrasonic

diagnosis.

ADVANTAGE - The composition serves as a medium for the diagnosis and permits so far difficult acquisition of clear images of the aged.

15/25/45 (Item 45 from file: 350)

0008720601

WPI ACC NO: 1998-261632/199823

Related WPI Acc No: 1996-455300; 1998-398128

XRAM Acc No: C1998-081348

XRPX Acc No: N1998-206179

Reducing electrode impedance of implantable bio-sensor - by coating bio-sensor with hydrogel formed from diiso-cyanate, hydrophilic polymer and chain extender

Patent Assignee: DECKER C C (DECK-I); MASTROTOTARO J J (MAST-I); MEDTRONIC MINIMED INC (MEDT); MINIMED INC (MINI-N); VAN ANTWERP W P (VANT-I)

Inventor: DECKER C; DECKER C C; MASTROTORO J J; MASTROTOTARO J J; MASTROTOTORO J; MASTROTOTORO J J; VAN ANTWERP W; VAN ANTWERP W P; VAN ANTWERP P

14 patents, 78 countries

Patent Family (14 patents, 78 countries)

Patent Number	Kind	Date	Update	
WO 1998017995	A1	19980430	199823	B
US 5786439	A	19980728	199837	E
AU 199850921	A	19980515	199838	E
EP 876604	A1	19981111	199849	E
JP 2000502280	W	20000229	200022	E

US 20010008931	A1	20010719	200143	E
US 6462162	B2	20021008	200274	E
US 20030069383	A1	20030410	200327	E
US 6784274	B2	20040831	200457	E
EP 876604	B1	20060524	200635	E
DE 69735932	E	20060629	200643	E
JP 3852712	B2	20061206	200680	E
DE 69735932	T2	20070104	200705	E
CA 2238648	C	20070313	200723	E

Local Applications (No Type Date): WO 1997US19513 A 19971024; US 1996749754 A 19961024; AU 199850921 A 19971024; EP 1997913826 A 19971024; WO 1997US19513 A 19971024; WO 1997US19513 A 19971024; JP 1998519720 A 19971024; US 1996749754 A 19961024; US 1998123930 A 19980728; US 1995410775 A 19950327; US 1996721262 A 19960926; US 1996749754 A 19961024; US 1998123930 A 19980728; US 1995410775 A 19950327; US 1996721262 A 19960926; US 1996749754 A 19961024; US 1998123930 A 19980728; US 2002213265 A 20020806; US 1996749754 A 19961024; US 1998123930 A 19980728; US 2002213265 A 20020806; EP 1997913826 A 19971024; WO 1997US19513 A 19971024; DE 69735932 A 19971024; EP 1997913826 A 19971024; WO 1997US19513 A 19971024; WO 1997US19513 A 19971024; JP 1998519720 A 19971024; DE 69735932 A 19971024; EP 1997913826 A 19971024; WO 1997US19513 A 19971024; CA 2238648 A 19971024; WO 1997US19513 A 19971024

Priority Applications (no., kind, date): US 1995410775 A 19950327; US 1996721262 A 19960926; US 1996749754 A 19961024; US 1998123930 A 19980728; US 2002213265 A 20020806

Alerting Abstract WO A1

Reducing electrode impedance of an implantable biosensor comprises coating the biosensor with a hydrogel in which the hydrogel is formed from a reaction mixture of: (a) a diisocyanate comprising 50 mole% of the

reactants; (b) a hydrophilic polymer selected from a hydrophilic polymer

diol and a hydrophilic polymer diamine, and optionally (c) a chain

extender, where the hydrogel having a water pickup of 120-400 wt. %. Also

claimed is an implantable biosensor having the hydrogel coating.

USE - The hydrogels are used with a variety of biosensors for providing a

surrounding water layer for the electrodes. Such sensors include sensors

for monitoring glucose concentration of diabetics.

ADVANTAGE - The coatings for implantable sensors are extremely

hydrophilic and provide a substantial and uniform aqueous flow around the

sensors.

15/25/54 (Item 54 from file: 350)

0006656905 - Drawing available

WPI ACC NO: 1994-034766/199404

XRAM Acc No: C1994-016021

XRPX Acc No: N1994-027080

Imaging balloon catheter for angiography - retains shape of vessel when

withdrawn and re-inflated at lower pressure

Patent Assignee: SCIMED LIFE SYSTEMS INC (SCIM-N)

Inventor: ADAMS D O; HENDRICKSON G L; SOGARD D J; WANG L

3 patents, 3 countries

Patent Family (3 patents, 3 countries)

Patent Number	Kind	Date	Update	
WO 1994001146	A2	19940120	199404	B
US 5316016	A	19940531	199421	E
WO 1994001146	A3	19940317	199515	E

Local Applications (No Type Date): WO 1993US6437 A 19930707; US

1992909772 A 19920707; WO 1993US6437 A 19930707

Priority Applications (no., kind, date): US 1992909772 A 19920707

Alerting Abstract WO A2

A catheter has a shaft (32) with a balloon mounted on the distal end which conforms to the shape of a vessel when inflated at a first pressure.

The balloon maintains the shape of the vessel after being deflated, removed

from the vascular system, and reinflated at a second pressure.

Pref. the first pressure is greater than the second, less than a lesion-deforming pressure and is esp. 40-100 (partic. 40-60) psig. The second pressure is pref. 5-25 (5-10) psig. The balloon is pref. made of a

1:1-9 (3:7) by wt. blend of glycol-modified PET and

polybutylene-terephthalate, and may be biaxially-oriented.

The mfr. of an imaging balloon by extrusion of blend and a method of imaging a body vessel lumen using using the above catheter are also claimed.

USE/ADVANTAGE - Used in angiography to record the shape of an obstruction. The catheter, produces a three-dimensional negative image to

facilitate a decision on further treatment, and is easy to mfr. at low cost.

^5/25/64 (Item 64 from file: 350)

0004964001

WPI ACC NO: 1989-358187/198949

XRAM Acc No: C1989-158760

XRPX Acc No: N1989-272272

Liquid segment polyurethane gel - used to prepare a coupler having a socket

for insertion of a probe for ultrasonic diagnosis

Patent Assignee: TAKIRON CO (TAKI-N); TAKIRON KK (TAKI-N)

Inventor: BOUTANI H; BOUYA H; SHIKINAMI Y; TANIGUCHI M; TSUTA K

10 patents, 8 countries

Patent Family (10 patents, 8 countries)

Patent Number	Kind	Date	Update	
EP 344773	A	19891206	198949	B
JP 1304109	A	19891207	199004	E
JP 2131753	A	19900521	199026	E
US 4966953	A	19901030	199046	E
US 5039774	A	19910813	199135	E
CA 1318049	C	19930518	199325	E
EP 344773	B1	19970129	199710	E
DE 68927722	E	19970313	199716	E
JP 2899804	B2	19990602	199927	E
KR 199702485	B1	19970305	199935	E

Local Applications (No Type Date): EP 1989109933 A 19890601; JP 1988135976 A 19880602; JP 1988286520 A 19881111; JP 1988135976 A 19880602; JP 1988286520 A 19881111; US 1989355703 A 19890523; US 1990530517 A 19900530; CA 601624 A 19890602; EP 1989109933 A 19890601; DE 68927722 A 19890601; EP 1989109933 A 19890601; JP 1988135976 A 19880602; KR 19897567 A 19890602

Priority Applications (no., kind, date): JP 1988135976 A 19880602; JP 1988286520 A 19881111

Alerting Abstract EP A

A liquid segment polyurethane gel comprising segments that are liquid at room temp. is claimed which is obtd. by reacting a polyol having an alkylene oxide (AO) chain which is liquid at room temp. and/or a polyurethane polyol prepolymer having an AO chain which is liquid at room temp. with a polyurethane polyisocyante prepolymer having an AO chain which is liquid at room temp.

The AO chain may be e.g. polymethylene glycol, polyethylene glycol,

polybutylene glycol, polytetramethylene glycol, polypentamethylene glycol

or polyheptamethylene glycol.

Also claimed is a coupler for a probe for ultrasonic diagnosis comprising

the liquid segment polyurethane gel having a socket into which the probe

for ultrasonic diagnosis is to be inserted and a smooth surface part which

is to be brought into planar contact with the skin.

ADVANTAGE - The gel is excellent in safety to the human body and

preservative stability bleeding or evapn. of the dispersion medium. It has

a low modulus and satisfactory resistance to tension, scratches and

abrasions. It has reduced internal strain and does not cause absorption,

irregular reflection or multiple reflection of light or sound. The

ultrasonic diagnosic probe exhibits excellent adhesion to both the probe

and the skin and provides a clean image free from noise and artifacts.

(

^15/25/67 (Item 67 from file: 350)

0003766614

WPI ACC NO: 1986-216628/198633

XRAM Acc No: C1986-093466

XRPX Acc No: N1986-161584

Transparent viscous compsn. for ultrasonic diagnosis - comprises

carboxyvinyl polymer salt, hydroxyethyl cellulose, disodium phosphate,

monopotassium phosphate polyhydric alcohol and water

Patent Assignee: KANEBO LTD (KANE)

2 patents, 1 countries

Patent Family (2 patents, 1 countries)

Patent

Number Kind Date Update

JP 61149128 A 19860707 198633 B

JP 1990026496 B 19900611 199027 E

Local Applications (No Type Date): JP 1984271173 A 19841221; JP 1984271173 A 19841221

Priority Applications (no., kind, date): JP 1984271173 A 19841221

Alerting Abstract JP A

New transparent viscous compsn. for ultrasonic diagnosis comprises carboxyvinyl polymer salt, hydroxyethyl cellulose, disodium phosphate, monopotassium phosphate, a polyhydric alcohol, and water.

Polyhydric alcohol may be at least one kind from glycerine, diglycerine, propylene glycol, dipropylene glycol, 1,3-butylene glycol and polyethylene glycol. Carboxyvinyl polymer salt, hydroxyethyl cellulose, polyhydric alcohol and water may be used in 0.4-1.2, 0.03-0.8, 10-80 and 60-85 wt.% respectively to total amt. of compsn. Disodium to monopotassium phosphate wt. ratio may be 1:0.2-6.0. Total amt. of disodium and monopotassium phosphates may be 0.2-2.5 wt.% to compsn.

USE/ADVANTAGE - Compsn. is used by applying between skin and probe for ultrasonic diagnosis. It can keep propagation of ultrasonic energy good, and has excellent storage stability and induces no skin irritation.

^15/25/69 (Item 69 from file: 350)

0002280963

WPI ACC NO: 1981-96017D/198152

Gelling agent for supersonic wave diagnostic device - obtd. by gelling e.g. water and ethyleneglycolmonobutylether, with crosslinkable polyacrylic polymer and neutraliser

Patent Assignee: ASAHI KAKEN KK (ASAH-N)

2 patents, 1 countries

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Update	
JP 56148341	A	19811117	198152	B
JP 1988018500	B	19880419	198819	E

Local Applications (No Type Date): JP 198049622 A 19800417; JP 198049622 A 19800417

Priority Applications (no., kind, date): JP 198049622 A 19800417

Alerting Abstract JP A

Gelling agent, used in supersonic wave diagnostic device, is obtd. by gelling water-wettable liq., consisting of water and a wetting agent, e.g., ethylene-glycol mono-butylether, butyleneglycol, polyoxyethylenealkyl-phenylether, polyoxyethylene- alkylether, propyleneglycol, glycerine, polyethylene-glycol, etc., to gel with a cross- linkable acrylic polymer and a neutraliser, e.g., sodium carbonate, sodium bicarbonate, sodium hydroxide, triethanolamine, etc.

The gelling agent has a very high supersonic wave transmittability and an adequate viscosity as well as transparency and no toxicity and also does not flow and drip. The gelling agent is hardly dryable, free of irritative action to living tissue, and can be easily and completely removed by dry or wet cloth or paper after treatment. In addn., the gelling agent is hard to penetrate into the small holes of transducer and can be easily cleaned if it penetrates into the small holes. Thus, the gelling agent is most effectively applicable as a medium for supersonic wave diagnostic device.

STN Chemical Search

L4 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:434207 HCAPLUS
DOCUMENT NUMBER: 147:39807
TITLE: Study of the Acoustic and Thermodynamic Properties of 1,2- and 1,3-Butanediol by Means of High-Pressure Speed of Sound Measurements at Temperatures from (293 to 318) K and Pressures up to 101 MPa
AUTHOR(S): Zorebski, Edward; Dzida, Marzena
CORPORATE SOURCE: Institute of Chemistry, University of Silesia, Katowice, 40006, Pol.
SOURCE: Journal of Chemical & Engineering Data (2007), 52(3), 1010-1017
CODEN: JCEAAX; ISSN: 0021-9568
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The speeds of sound in 1,2- and 1,3-butanediol have been measured in the temp. range from (293 to 318) K at pressures up to 101 MPa by the pulse-echo-overlap method. The densities of both the butanediol isomers have been measured in the temp. range from (288.15 to 363.15) K under atm. pressure with a vibrating tube densimeter. From the exptl. results the densities, isobaric heat capacities, isobaric coeffs. of thermal expansion, isentropic and isothermal compressibilities, as well as the internal pressure as function of temp. and pressure have been calcd. The effects of pressure and temp. are discussed.
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:622278 HCAPLUS
DOCUMENT NUMBER: 145:322276
TITLE: A comparative study of thermophysical and spectroscopic properties in mixtures of isomeric butanediol and N,N-dimethylformamide
AUTHOR(S): Mehta, S. K.; Ram, Ganga; Mani, Chander; Bhasin, K. K.
CORPORATE SOURCE: Department of Chemistry and Centre of Advanced Studies in Chemistry, Panjab University, Chandigarh, 160 014, India
SOURCE: Journal of Chemical Thermodynamics (2006), 38(7), 836-848
CODEN: JCTDAF; ISSN: 0021-9614
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The thermodn. parameters, viz. excess molar volume and ultrasonic speed, transport parameter viscosity, and spectroscopic parameters, viz. IR and 1H and 13C NMR have been measured for the mixts. of isomeric butanediol (1,2-, 1,3-, 1,4-, and 2,3-butanediol) and N,N-dimethylformamide over the whole compn. range at 308.15 K. The partial molar quantities, isentropic compressibility, deviation in ultrasonic velocity, viscosity deviation, deviation in Gibbs energies of activation for viscous flow, and excess NMR chem. shift have

also been estd. and analyzed. Results show that the interaction between unlike mols. takes place through hydroxyl groups of isomeric butanediol and the >CO group of N,N-dimethylformamide. Excellent correlation between thermodn. and spectroscopic measurements is obsd.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:544796 HCAPLUS
DOCUMENT NUMBER: 143:346754
TITLE: Effect of placement of hydroxyl groups in isomeric butanediol on the behaviour of thermophysical and spectroscopic properties of pyrrolidin-2-one
AUTHOR(S): Mehta, S. K.; Ram, Ganga; Bhasin, K. K.
CORPORATE SOURCE: Department of Chemistry, Centre of Advanced Studies in Chemistry, Punjab University, Chandigarh, 160 014, India
SOURCE: Journal of Chemical Thermodynamics (2005), 37(8), 791-801
CODEN: JCTDAF; ISSN: 0021-9614
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The thermophys. parameters, viz. excess molar volume VE, ultrasonic speed u, viscosity .eta. and spectroscopic parameters, viz. IR and 1H NMR have been measured for the mixts. of pyrrolidin-2-one and isomeric butanediol (1,2-, 1,3-, 1,4- and 2,3-BTD) over the whole compn. range at 308.15 K. Results indicate that intermol. interactions for different mixts. increase in the order: 2,3-BTD < 1,2-BTD < 1,3-BTD < 1,4-BTD. Isentropic compressibility KES, excess viscosity .eta.E and excess Gibbs free energies of activation for viscous flow .DELTA.aG*E have also been estd. and analyzed. The spectroscopic measurements (IR and 1H NMR) confirm that the interaction between unlike mols. takes place through hydroxyl groups of isomeric butanediol. A good agreement is obtained between excess quantities and spectroscopic data.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:633670 HCAPLUS
DOCUMENT NUMBER: 141:302271
TITLE: Positron annihilation in and compressibility of n-butanol in ethylene glycol, 1,2-butanediol and 1,4-butanediol: Do hydrophobic-like phenomena occur in non-aqueous, highly-associated solvents?
AUTHOR(S): Jerie, K.; Baranowski, A.; Glinski, J.; Przybylski, J.
CORPORATE SOURCE: Institute of Experimental Physics, University of Wroclaw, Wroclaw, Pol.
SOURCE: Journal of Radioanalytical and Nuclear Chemistry (2004), 261(3), 645-649
CODEN: JRNCDM; ISSN: 0236-5731
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Exptl. results of positron annihilation expts. in solns. of n-butanol in three diols are compared to those of ultrasonic velocity and

absorption. Variations of the annihilation parameters with compn. show that the effect of the hydrophobic solute on the original diol structure is rather limited and occurs only in the system where ethylene glycol is the solvent. Subtle similarities were found when compared it to the resp. results for similar aq. systems, suggesting that cryst.-like solvates are forming in ethylene glycol. However, no such evidences were found for the systems where butanediols are the solvents. Ultrasonic investigations do not confirm formation of any specific structures. This is caused, most possibly, by the fact that compressibility of solvates is close to those of the pure components and/or that of unstructured medium (regular soln.).
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

^L4 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:742792 HCAPLUS
DOCUMENT NUMBER: 139:313159
TITLE: Densities, Dynamic Viscosities, Speeds of Sound, and Relative Permittivities for Water + Alkanediols (Propane-1,2- and -1,3-diol and Butane-1,2-, -1,3-, -1,4-, and -2,3-Diol) at Different Temperatures
AUTHOR(S): George, John; Sastry, Nandhibatla V.
CORPORATE SOURCE: Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, 388120, India
SOURCE: Journal of Chemical and Engineering Data (2003), 48(6), 1529-1539
CODEN: JCEAAX; ISSN: 0021-9568
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Exptl. densities, dynamic viscosities, speeds of sound, and relative permittivities for six binary mixts. of water + alkanediols (propane-1,2- and -1,3-diol and butane-1,2-, -1,3-, -1,4-, and -2,3-diol) were measured across the whole compn. range and in the temp. range (298.15 to 338.15) K. The deviations in dynamic viscosities, excess isentropic compressibilities, and deviations in relative permittivities were also calcd. and fitted to a Redlich-Kister type equation. The partial molar volumes at infinite diln. for the water in six binary mixts. and the differences in these values among various diol isomers were calcd. and examd. to ascertain structural information on the water mols. around various diols. The variation of the Kirkwood correlation factor was also examd. across the whole compn. range of the mixts.
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:544921 HCAPLUS
DOCUMENT NUMBER: 139:282156
TITLE: Hydrophobic-like solvation in non-aqueous solutions: Positron annihilation in and compressibility of n-hexanol in ethylene glycol, 1,2-butanediol and 1,4-butanediol
AUTHOR(S): Jerie, K.; Baranowski, A.; Glinski, J.; Przybylski, J.
CORPORATE SOURCE: Institute of Experimental Physics, University of Wroclaw, Pol.
SOURCE: Journal of Radioanalytical and Nuclear Chemistry

(2003), 257(2), 367-370
CODEN: JRNCDM; ISSN: 0236-5731
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The results of positron annihilation expts. of solns. of n-hexanol in diols are compared to those of ultrasonic velocity and absorption. Variations of the annihilation parameters with compn. allow the conclusion that the effect of hydrophobic solute on the original diol structure is limited. There are, however, significant similarities with the results known for aq. systems, suggesting that clathrate-like solvates are forming in ethylene glycol, the phenomenon called here is a hydrophobic-like solvation. No evidences for it were found for the systems contg. butanediols as solvents. Ultrasonic investigations do not confirm the formation of any specific structures, most possibly because the compressibilities of solvates are close to those of the pure components.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:496449 HCAPLUS
DOCUMENT NUMBER: 137:337547
TITLE: Nucleophile assisted hydrolysis of carbon-oxygen bonds in ethers
AUTHOR(S): Polydore, Catherine; Roundhill, D. Max; Liu, Heng-Qian
CORPORATE SOURCE: Department of Chemistry, Texas Tech University, Lubbock, TX, 79409-1061, USA
SOURCE: Journal of Molecular Catalysis A: Chemical (2002), 186(1-2), 65-68
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:337547
AB The hydrolysis of ether bonds is a potentially green method for using plants as a source of chems. The hydrolysis of the carbon-oxygen bond in ethers is induced by molybdate as nucleophile, or by aluminum phosphate in combination with ultrasound. Calcns. are used to det. patterns affecting the enthalpy of the hydrolysis of ethers to alcs. The hydrolysis of ether bonds is a potentially green method for using plants as a source of chems. Although the arylalkyl ether anisole can be hydrolyzed to phenol and methanol in the presence of aluminum chloride, the method has the disadvantage that it produces large amts. of alumina as by product. Since the carbon atoms of ethers that are directly bound to the oxygen have carbonium ion character, nucleophilic attack is a possible route to inducing cleavage of these carbon-oxygen bonds. The hydrolysis of the carbon-oxygen bond in ethers is induced by molybdate as nucleophile, or by aluminum phosphate in combination with ultrasound. High yields are obtained with epoxides, and significantly lower yields with trimethylene oxide and THF. The molybdate or phosphate oxoanion acts as the nucleophile. Calcns. have been carried out to det. patterns affecting the enthalpy of the hydrolysis of ethers to alcs. These show that the reaction is close to being thermo-neutral, but that both ether hydrolysis and ether ammonolysis are enthalpically favored, esp. for ethers that have sterically bulky or fluorinated

substituents.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

^L4 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:310152 HCAPLUS
DOCUMENT NUMBER: 135:61047
TITLE: Structure of aqueous solutions of 1,2-, 1,3- and 1,4-butanediol investigated by positron annihilation and ultrasonic methods
AUTHOR(S): Jerie, K.; Baranowski, A.; Glinski, J.; Orzechowski, K.; Przybylski, J.
CORPORATE SOURCE: Institute of Experimental Physics, Wroclaw University, Wroclaw, 50-205, Pol.
SOURCE: Acta Physica Polonica, A (2001), 99(3-4), 393-398
CODEN: ATPLB6; ISSN: 0587-4246
PUBLISHER: Polish Academy of Sciences, Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The structure of aq. solns. of 1,2-, 1,3- and 1,4-butanediol was investigated using adiabatic compressibility measurements and positron annihilation methods. In the case of 1,2-butanediol the exptl. results are very similar to those obtained earlier for systems where hydrophobic hydration dominates. In other cases there are evidences for increased rigidity of the water network, which arises from formation of hydrogen bonds between diols and water. Usefulness of both the methods applied in investigating the structure of liq. solns. was proved.
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:159831 HCAPLUS
DOCUMENT NUMBER: 132:186115
TITLE: Investigation of the structure of aqueous solutions of 1,2- and 1,4-butanediol by positron annihilation and ultrasonic methods
AUTHOR(S): Jerie, K.; Baranowski, A.; Glinski, J.; Orzechowski, K.
CORPORATE SOURCE: Institute of Experimental Physics, Wroclaw University, Pol.
SOURCE: Journal of Radioanalytical and Nuclear Chemistry (1999), 241(2), 265-270
CODEN: JRNCDM; ISSN: 0236-5731
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The structure of aq. solns. of 1,2-butanediol and 1,4-butanediol was investigated using adiabatic compressibility measurements and positron annihilation methods. In the case of 1,2-butanediol the exptl. results are very similar to those obtained earlier for systems where hydrophobic hydration dominates. In both cases there are evidences for increased rigidity of the water network, which arises from the formation of hydrogen bonds between diols and water. The usefulness of both the methods applied in investigating the structure of liq. solns. was proved.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:465321 HCAPLUS
DOCUMENT NUMBER: 129:236217
TITLE: Ultrasonic velocity and volumetric properties of isomeric butanediols plus water systems
AUTHOR(S): Hawrylak, Brent; Gracie, Kim; Palepu, R.
CORPORATE SOURCE: Dept. of Chemistry, Memorial Univ., St. Johns, NF, A1B 3X7, Can.
SOURCE: Canadian Journal of Chemistry (1998), 76(4), 464-468
CODEN: CJCHAG; ISSN: 0008-4042
PUBLISHER: National Research Council of Canada
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ultrasonic velocities and densities of binary aq. solns. of isomeric butanediols were measured in the temp. range 298-318 K at 10 degree intervals over the entire compn. range, and 5 degree intervals in the water-rich region. The exptl. data in the dil. region, with mole fraction of water less than 0.1, was analyzed to det. the partial molar volumes and adiabatic compressibilities of water at infinite diln. The std. thermodn. transfer functions were calcd. to evaluate the environment of water at infinite diln. in these systems. From the compressibility isotherms, as a function of temp. in the water-rich region, the formation and the compn. of clathrate-like structures in the liq. solns. was detd., and the nature of these structures was discussed.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:207640 HCAPLUS
DOCUMENT NUMBER: 128:296303
TITLE: Thermodynamic properties of binary mixtures of butanediols with water
AUTHOR(S): Hawrylak, Brent; Gracie, Kim; Palepu, R.
CORPORATE SOURCE: Department Chemistry, St. Francis Xavier University, Antigonish, NS, B2G 2W5, Can.
SOURCE: Journal of Solution Chemistry (1998), 27(1), 17-31
CODEN: JSLCAG; ISSN: 0095-9782
PUBLISHER: Plenum Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ultrasonic velocities and densities at five different temps. over the entire compn. range for aq. solns. of 1,2-, 1,3-, 1,4-, and 2,3-butanediols were measured. Excess vols. and adiabatic compressibilities were calcd. using the exptl. data. Apparent and partial molar volumes and compressibilities were analyzed to evaluate the departure from ideal soln. behavior. From the anal. of the results, the interactions of isomeric butanediols with water are discussed in terms of the placements of hydroxyl groups in the isomeric butanediol mols.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:397694 HCAPLUS
DOCUMENT NUMBER: 127:99877
TITLE: Method of immersion sterilization and organic cold

chemical sterilant
INVENTOR(S): Simmons, Paul L.; Immekus, Robert L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 8 pp., Cont.-in-part of U.S. 5,405,602.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5637307	A	19970610	US 1994-195365	19940214
US 5145663	A	19920908	US 1991-642709	19910117
US 5405602	A	19950411	US 1992-901592	19920619

PRIORITY APPLN. INFO.: US 1989-304312 B1 19890131
US 1991-642709 A2 19910117
US 1992-901592 A2 19920619

AB A method of immersion sterilization of medical and dental instruments, and an org. cold chem. sterilant capable of killing a challenge of target microorganisms including bacterial spores, are provided (no data). The method of immersion sterilization comprises the steps of: (1) immersion of the instruments in a 1st org. soln. comprising a reverse micellar environment to solubilize the protein of the microorganisms, (2) immersion in an aq. soln. to unprotonate the solubilized proteins, (3) exposing the bioburden on the instruments to ultrasonic agitation to remove org. material from the instruments, (4) immersion in a 2nd org. soln. to crosslink the binding sites of the unprotonated proteins, thereby denaturing the proteins to corrupt and penetrate the bacterial walls to kill the endospores and other microorganisms. The org. cold chem. sterilant comprises an azeotropic mixt. of a monohydric alc., a polyhydric alc., a dialdehyde, a surface-active agent, and water in preferred proportions of 70:(8-12):(0.5-1.0):(0.5-1.0):(14-18) by wt. to denature the proteins, corrupt and penetrate the bacterial and conidial walls, and kill the endospores and other microorganisms. The 1st org. soln. has a similar compn. but without the dialdehyde.

^L4 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:412663 HCAPLUS
DOCUMENT NUMBER: 97:12663
ORIGINAL REFERENCE NO.: 97:2181a,2184a
TITLE: Ultrasonic relaxation in aqueous solutions of butanediols
AUTHOR(S): Nishikawa, Sadakatsu; Mashima, Mitsuo
CORPORATE SOURCE: Dep. Chem., Saga Univ., Saga, 840, Japan
SOURCE: Journal of the Chemical Society, Faraday Transactions 1: Physical Chemistry in Condensed Phases (1982), 78(4), 1249-55
CODEN: JCFTAR; ISSN: 0300-9599
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ultrasonic absorption and velocity were measured to investigate the structural and dynamic properties of aq. solns. of HO(CH2)4OH and HOCH2CHEtOH at 20.degree.. In the former soln. no excess absorption was found, and in the latter soln. a single relaxation process was obsd. at 15-220 MHz. The excess absorption mechanism was analyzed as a

solute-solvent interaction, AB.dblharw.A + B. The rate consts. for HOCH2CHEtOH soln. are kf = 1.5 .times. 108 s-1 and kb = 1.6 .times. 108 dm3 mol-1 s-1 for the forward and reverse steps, resp. The influence of the position of OH groups in these mols. on H2O structure is discussed by a comparison of the results for solns. of the two dihydric alcs.